Homecraft

DECEMBER 1954

35c

AN ISSUE FULL OF GIFTS YOU CAN MAKE YOURSELF FOR ALL THE FAMILY AND FOR THE HOME

Featuring CHRISTMAS SHOPPING *with the editors*

Try this tube...

and learn the truth about hide glue . . . for only 15c

Franklin Glue is the same as the hot hide glue used by old-time craftsmen in modern, easy-to-use form. No heating. No mixing. No odor. No chilled joints. Apply at room temperature.
Franklin Glue is the original genuine hide glue in liquid, ready-to-use form. Its extra strength and permanence will be apparent to you the first time you use it.

best for all wood work

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use it right out of the can . . . .

No waste with Franklin Glue. Use it out of wide-mouth can. Franklin Glue is good until the last drop is used.

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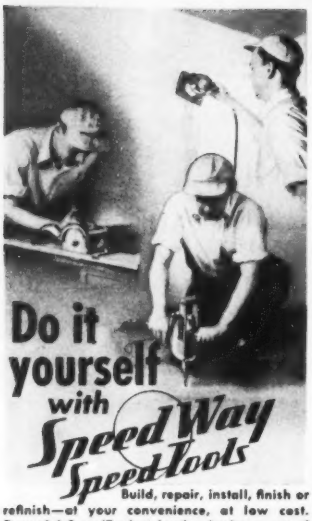

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Homecraft & THE HOME OWNER

America's First Home Workshop Magazine

Volume 23 No. 2
Whole No. 142

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L. F. McCLURE
President

RUSSELL C. JOHNS
Editor & Publisher

E. COOPER
Production Mgr.

FRANK CULHANE
Associate Editor

DICK HUTCHINSON
Associate Editor

PERRY S. GRAFFAM
Associate Editor

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WALT DURBAHN
Associate Editor

J. G. McCOLLAM
Contributing Editor

A. WIEMOLD
Circulation Manager

•

MAIN OFFICE
154 East Erie St.
Chicago 11, Ill.
Phone DElaware 7-3605

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Arthur W. Wilson & Assocs.
40 E. 50th St.
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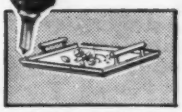
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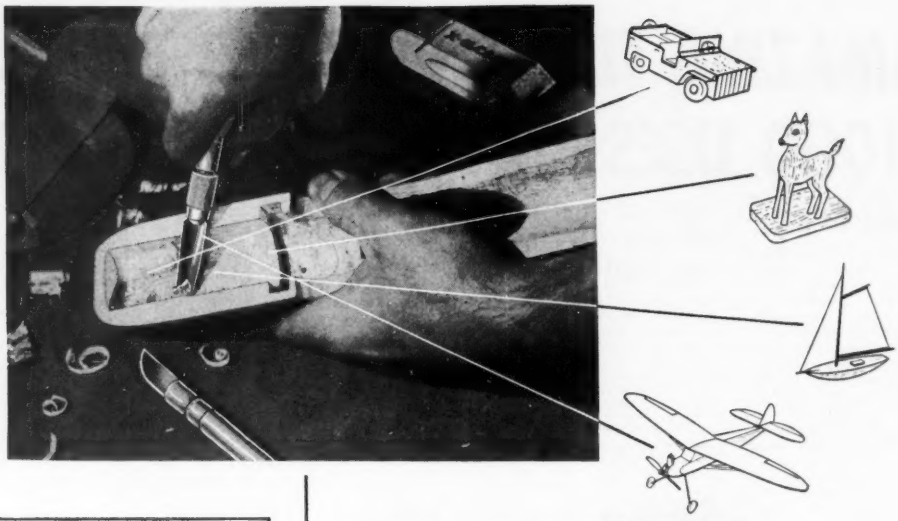

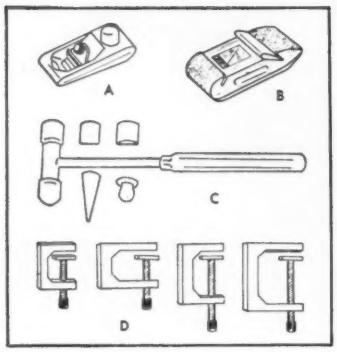

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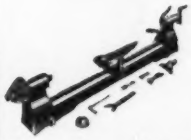

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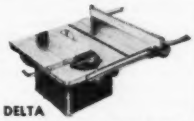

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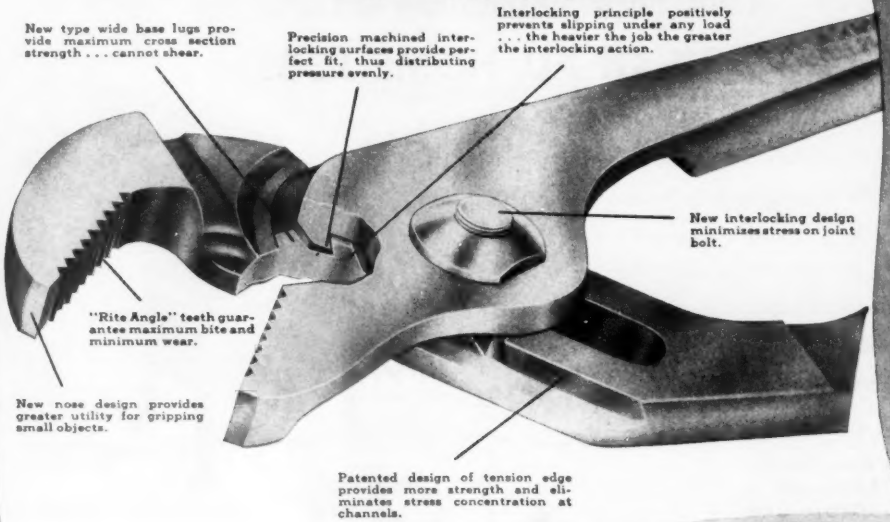

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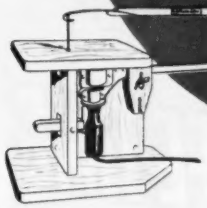

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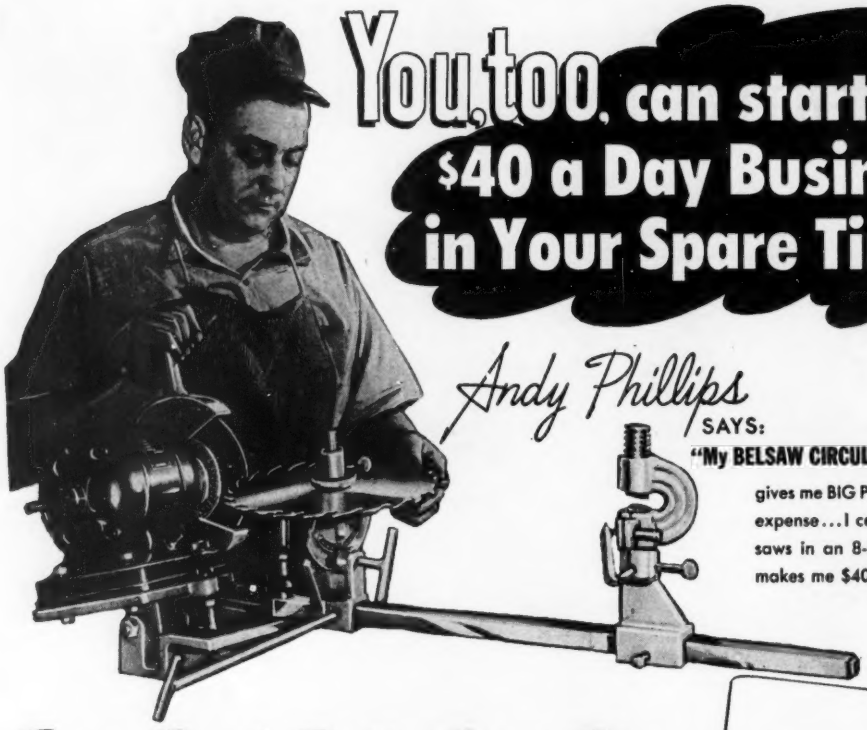

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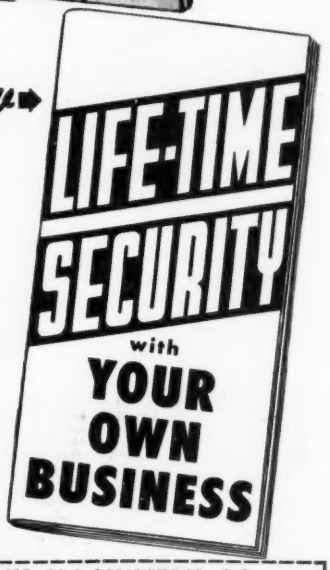

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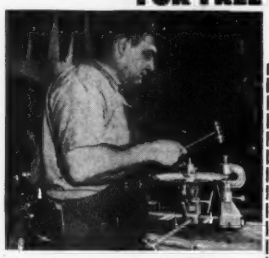

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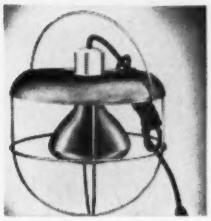
CHRISTMAS SHOPPING with the editors



Multi-Purpose Infra-Red Lamp

For motorists: prevents freezing; thaws cold, damp carburetors and ignition systems; insures quick start; protects cylinder from freezing. Around the house: for thawing pipes, drying paint, varnish, lacquer, enamel, etc. As brooder: provides sufficient heat to brood 100 to 150 chicks and young turkeys. Also good for brooding pigs and lambs. Steel with heavy wire lamp guard; baked red enamel. Operates on 110-115 volts AC. $3.95 complete. Pleasant Valley Dist. Co., Box 383, Dept. PH, Park Ridge, Ill.

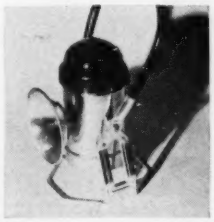
House, Lawn Marker Patterns

Full-size patterns of 17 novel silhouette cutouts, all kinds of designs, plus complete alphabet and numbers 0 to 9 inclusive, ready to trace onto wood. Sawing out is easy, quick. Marker with name or address is excellent personalized gift or distinctive addition to your own home. Make markers for fun and to sell. Complete kit, $1.00 postpaid. Craftplans, Dept. P 210, 1321 S. Michigan, Chicago 5, Ill.

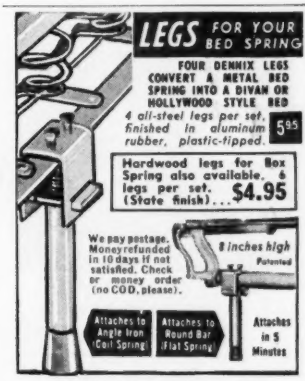
Ingenious Surface Clamp

The Caston Clamp can be bolted anywhere on the surface of wood or metal top work bench; also on metal surfaces with "T" slots. When not in use, clamp slips off easily, and bolt-head drops into countersunk opening. Clamp turns to any angle; holds work immovable, leaving the hands free. Can be used at any location on bench by drilling hole where needed. An ideal Christmas gift. $3 each, two for $5 (extra bolts 15c each). H. E. Caston, 788 Yale St., Akron 11, Ohio.

3-Way Portable Safety Lantern



Consider this Handilite for Christmas giving, especially to car owners. It provides both a red flasher to signal oncoming cars and a white flood light with 1000' beam. Perfect for changing tires and other roadside repairs. Use both lights together or either light alone. Weatherproof, lightweight aluminum, 12½" to top of handle. With 6-volt battery, $6.95 postpaid. Guaranty Sales Co., Box 176, Dept. B5, Teaneck, N.J.



LEGS FOR YOUR BED SPRING

FOUR DENNIX LEGS CONVERT A METAL BED SPRING INTO A DIVAN OR HOLLYWOOD STYLE BED

4 all-steel legs per set, finished in aluminum rubber, plastic-tipped. $5.95

Hardwood legs for Box Spring also available. 6 legs per set. (State finish)... $4.95

We pay postage. Money refunded in 10 days if not satisfied. Check or money order (no COD, please).

8 inches high

Patented

Attaches to Angle Iron (Coil Spring)

Attaches to Round Bar (Flat Spring)

Attaches in 5 Minutes

JORE and Co., Dept. 99X

78 Fifth Ave., N. Y. 11

A GIFT FOR HIM THAT SHE WILL LIKE

A Knife and Tool WetGrinder

Makes it easy to keep **his** carpenter, garden and homecraft tools sharp and **her** kitchen cutlery, scissors and carving knives always in wonderful condition. Also ideal for putting a keen, controlled bevel edge on long knives, axes, hatchets and plane bits. Large 2½" x 5" tilting work rest. Runs in own water bath but throws no water. Measures 7" x 8½" x 11¾". Shipping weight only 17 lbs. 8" x 1½" sandstone. Any small motor drives it. Shipped immediately, express charges collect. If your dealer cannot supply, send check or money order for only $18.15. **Boice-Crane Company, 993 Central Avenue, Toledo 6, Ohio.**

HERE'S BIG NEWS!

"ARCO SAW" NEW LARGER MODEL CUTS thru 2x4's with QUICK CUTTING 5" "ARCO SAFECUT" SAWBLADE.

AT BETTER HARDWARE STORES EVERY-WHERE

Attaches In One Minute to any ¼" Electric Drill

Cuts 8-Times Faster Than a Handsaw!

No. 455 "ARCO-SAW" $12.50 with ALL GAGES & 5" "ARCO SAFECUT" Blade

No. 454 "ARCO-SAW." same as above, less gauges. Has accurate visual Rule $10.95

Now, here is the first gear driven saw attachment for electric drills that will go through 2x4's in one easy cut. Comes equipped with a 5-inch "ARCO SAFECUT" Sawblade — the smoothest, fastest cutting sawblade made. Whizzes through lumber, plywood, wallboard, etc.

ONLY "ARCO" GIVES YOU THESE FEATURES: 5-inch "ARCO SAFECUT" SAFETY SAWBLADE—uses 30% less power, allows small drill to cut thru heavy wood. Precision Graduated Depth and Bevel Gages for cuts to 1¾" in depth, bevels from 0 to 45°. Adjustable Rip Gage for accurate strips. Adjustable Visual Guide (not shown) for straight and bevel cuts. Sturdiest, Most Easily Adjusted Safety-Yoke for absolute safety, keeps drill steady and vibration-free. Worm Drive Clamp releases drill in seconds for other work. Precision Gear Box with Steel Gears. Self-lubricating Lifetime Bearings. 90-DAY FACTORY GUARANTEE.

REPLACEMENT BLADES: Specify 5" Safecut, or Combination, or Rip, or Crosscut Style..... $1.75

NEW! 'ARCO STAND 'N TABLE'

MAKES A WORKSHOP OUT OF EVERY ¼" ELECTRIC DRILL!

HAS TILTING TABLE FOR Sanding, Grinding, Buffing, etc.

No. 400 $7.95

Sturdy Aluminum Castings hold complete unit vibration-free, allows operator to use both hands.

Consists of strong Drill Stand with Worm Drive Clamp and adjustable Table. Tilts to 45°, adjusts up or down for various jobs. Rubber cushioned Sander for beautiful sanding, can also be used in drill alone or drill press. 6 Sanding Discs and "Speed Cement."

No. 401 "ARCO STAND" consists of Drill Stand and Worm Drive Clamp only..... $2.75

NEW! 'ARCO SAFECUT' SAFETY SAWBLADES

The Safest, Fastest Cutting Sawblade Ever Made! Made of finest tempered tool steel. No "Kick-back" accidents—cannot drag hand into blade. Easily and quickly resharpened with ordinary handfile.

6" Blade..$1.75 7" Blade..$1.95 8" Blade..$2.15

Special Bores for Skil, Mall, B. & D. Saws—Add 30c

UNCONDITIONAL 10-DAY MONEY BACK GUARANTEE ON ALL ITEMS

DEALERS: Write for nearest jobber.

BUY THE BEST—see your hardware dealer now! Don't accept inferior substitutes—if not available send us check or M.O. (Postpaid). C.O.D.'s—postage extra.

ARROW METAL PRODUCTS CO.

Dept. PH-11, 140 West Broadway, N.Y. 13, N.Y.

Protect Your Life and Your Property From

FIRE!

Scots Guard

is always on duty day and night

Here is an automatic fire alarm which needs no wiring, no batteries. Positive action thermostat rings bell when temperature reaches 130° F. Does not require direct fire contact to sound alarm. Height 6½ ins. Easily installed with two small screws. To set, wind bell. To test, press top lever. Order a Scots Guard for YOUR home NOW! Your satisfaction GUARANTEED or your money back. Postpaid only $4.75

THE Westerneer

Plus 10c sales tax in Colorado

DESK M

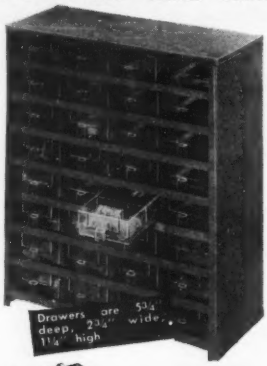
P.O. BOX FIVE

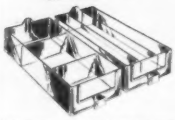
COLORADO SPRINGS, COLO.

"Haz-Bin, Jr."

HAS EVERYTHING

HANDIEST CABINET EVER BUILT FOR STORING SMALL PARTS





32-Drawer (96 Compartments)

$12.95

15¾" high, 6" deep, 12½" wide

Contents visible! Lifetime-guaranteed, crystal-clear plastic drawers. Strong all-steel cabinet has individual drawer guides. Baked-on silver-gray hammer finish. Sent complete with index cards, removable lengthwise and crosswise drawer dividers, rubber feet.

Drawer size for all models—2¾" wide, 1⅝" deep, 5⅞" long. Movable dividers separate each drawer into 3 compartments.

Made in 5 Sizes:

J-64	64 drawer (192 compartments)	$24.95
J-48	48 drawer (144 compartments)	20.95
J-32	32 drawer (96 compartments)	12.95
J-24	24 drawer (72 compartments)	10.95
J-16	16 drawer (48 compartments)	7.75

Post paid if full payment with order — Otherwise C.O.D., f.o.b. Akron, Ohio. Add 3% Sales Tax if Ohio Order.

SEND FOR FREE DESCRIPTIVE FOLDER

10 Day FREE Trial!

Buehl & Associates 80 W. Bowery Street Akron 8, Ohio

SWISS MUSICAL CHURCH

Plays Silent Night. Beautifully finished; trimmed with Princess pine. Glistetts with snow. Stained Glassine windows. Adapted for lights. Brass bell in Steeple. 11"x7¼"x9¼". Prices Knock-down, complete with genuine Swiss Musical Movement $3.95 Postpaid. Assembled $6.95 Postpaid.

PILTZECKER SWISS IMPORTS
Wood-Ridge, N.J.

4 TOOLS IN 1 by Tatu METAL WORK SHOP FOR HOME AND PLANT

Patent No. 2053309

IT FORMS SHEARS PUNCHES RIVETS

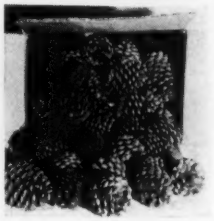
INTRODUCTORY PRICE Only **$6.95** DELIVERED

Ideal for hobbyists, craftsmen, repair shops, garages, model mfgrs., experimental labs, etc. Handles metals up to ¼" thickness depending upon hardness. Shipped complete with ⅛", ⅜" and ¼" punches and riveting dies. Check or money order must accompany order. No C.O.D.'s. Money will be refunded if not fully satisfied.

ALBERT J. TATU CO
85 Columbia Dr. Dept. 2 Williamsville 21, N. Y.

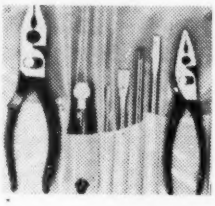
CHRISTMAS SHOPPING *with the editors*

Magic Fire Cones



California pine cones encrusted with metallic salts that burn with brilliant multi-colored flames give added charm and warmth to an open fire. Cones packed in handy carrying case, more than 40 cones to a case. A single cone will produce a fine showing of colored flame, several give a spectacular display. Sell for $3.95 a box postpaid. Makaming, Box 387, Dept. PH, Fontana, Calif.

Novel Apron-Kit Gift

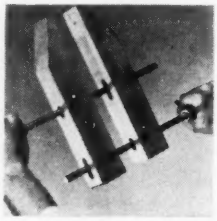


This 8-piece mechanic's and handyman's apron-kit will make him look twice Christmas morning. He'll use it around the home, in his workshop, around the car. Folds to fit in pocket. Plastic apron holds linesmen's forged slip-joint cutting pliers, plastic chuck handle which fits all tools, ⅛" and ¼" screwdriver, Phillips head screwdriver, ⅜" wood chisel, slip-joint thin nose cutting pliers. Price $2.45 plus 25c postage. Macson Co., 100 West End Avenue, New York, N.Y.

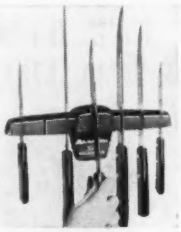
Protector Pad for Motorists

If you drive a lot you will appreciate this comfort gimmick. A combination accelerator and heel protector pad which fits all cars, you'll never be without one once you've tried it. Simply slip it over your original accelerator pedal. Protects car mats and pedals from wear. Has a non-skid tread. Install it in a minute without tools. Price $1.00 postpaid. H.D.R. Products, Box 85, Gravesend Station, Brooklyn 23, New York.

Extra Hands for the Workshop



Craftsmen will appreciate genuine "Jorgensen" hand screws for Christmas. They—or some other design of "Jorgensen" or "Pony" clamp—provide extra hands in the shop, of which most craftsmen never seem to have enough. Available in a wide range of sizes for every holding purpose; sold through leading hardware and tool stores. Made by Adjustable Clamp Company, 415 N. Ashland Ave., Chicago 22, Ill.



NEWEST 8-WAY KITCHEN CONVENIENCE

Price **$4.98**

Aladdin Knife Rack and Sharpener

Once again ALADDIN adds its magic touch to home efficiency. The famous ALADDIN Carbide Sharpener, and the new ALADDIN sure-grip six-knife rack, combined in handsome plastic setting, keep knives safely handy and streamline sharp at all times. Easily and securely mounted on any flat surface by its Magic-Back Pad it adds colorful convenience to kitchen duties. Perfect Christmas gift!

MAGIC PRODUCTS
157 Pine Road, Hammonton 77, N. J.

$12.00 OUTPERFORMS $50.00!!

Yes, the TIMEX LADIES' PETITE or TIMEX MEN'S CORONET at $12.00 outperforms BY TEST wrist watches that cost $50.00! As advertised in Life Magazine.

Beautifully designed—attractive enough for dress—rugged enough for work or play. Shockproof. Sweep Second Hand. 10K Yellow R. G. P. Genuine Pigskin smooth leather band with modern V-Conic movement so watch cannot be overwound.

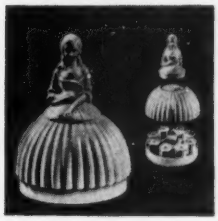
Children's Hop-A-Long Cassidy — Cinderella — Snow White Wrist Watches, $7.65.

Each watch guaranteed by world's largest wrist watch manufacturer. Prices Tax Paid—Gift Boxed—PPD.

Order today! Send check or money order. Satisfaction Guaranteed.

ASHLEY'S, Dept. D, Box 1109, Chicago 90, Ill.

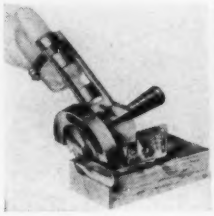
CHRISTMAS SHOPPING *with the editors*



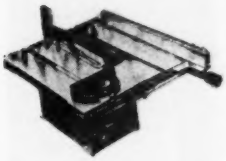
Fitted Sewing Kit

A graceful figurine finished to resemble bone-china with daintily hand decorated features. "Little Lady" opens at skirt-top disclosing a lovely pin cushion; and at the skirt-bottom for a tray fitted wth eight spools of popular colored threads, a dozen assorted needles and a thimble. Center compartment holds buttons, snaps and pins. "Little Lady" is 6" high in an attractive Christmas box. Postpaid $2.00. The Westerneer, Desk 71, Box 5, Colorado Springs, Colorado.

"Arco-Saw" Cuts 2 x 4's in One Cut



The manufacturer points out this is the first gear driven saw attachment for ¼" electric drills to go through 2 x 4's in one cut. Available in 2 models: No. 455 retails at $12.50, has depth-bevel-rip gages for cuts to 1¾" and bevels from 0 to 45°. No. 454 incorporates same features, lists at $10.95 less gages. Both models equipped with the new 5" "Arco Safecut" safety sawblade. Arrow Metal Products Co., Dept. PH-11, 140 West Broadway, New York 13, N.Y.



Bench Saw and Jointer

Atlas Machinery Company, 608 Arch St., Philadelphia 6, Penna., are offering genuine Atlas 8" bench saws (illustrated) for $27.75 and Atlas 4" jointers for $24.75. These low prices are for the pre-Christmas sale period. The bench saw has a 12¼" x 16" tilting table. The saw and jointer make an ideal combination for the home workshopper and home owning handyman. Cash with order; shipped express collect.

Knife and Tool Wet Grinder

This is really a "him-her" sort of gift. Ideal for keeping his workshop and gardening tools sharp—and her kitchen cutlery, scissors, etc. Features large 2½" x 5" tilting work rest. Runs in own water bath. Overall size: 7" x 8½" x 11¾". Has 8" x 1½" sandstone. Any small motor will operate. Shipped express collect. Price $18.15. Boice-Crane Co., 993 Central Ave., Toledo 6, Ohio.

NOW $11.95
Reg. $15.00

MUSICAL ROCKING DONKEY

The Toy of the Year—Beautifully made of finest quality plush. Sturdy steel frame on hardwood rockers. Wears a colorful saddle and bridle. All enclosed music box plays only as donkey rocks and never needs winding. 27" High x 22" long x 10" wide. Strong enough to hold an adult.

Send check or money order. No COD's. Pay express shipping charge on arrival.

Musical Rocking Horse available at same price

Georanty Sales Company
Box 178, Dept. BS, Teaneck, New Jersey

FACTORY TO YOU $79.95

SUPERSHOP offers you a precision-built complete power tool workshop. 100% ball bearing. RUGGED. Accurate. Big capacity. 15 day FREE trial. Money back guarantee. Mail postcard for FREE catalog. Buy on easy pay plan.

POWER TOOLS, INC. 542 Yates Avenue Racine, Wisconsin

GLITTERING Christmas Cards MAKE $50.00 (AND MORE) CASH

Personal Christmas Cards, Sparkle like Diamonds! Shimmering, Twinkling folders everyone will love. Show this new sensation to friends, neighbors. Extra Money! Christmas & Everyday Boxes. Name imprinted cards. 50 for $1.25, up. FREE GLITTERING SAMPLES plus assortments on approval. WRITE TODAY.

FREE SAMPLES

CHAS. C. SCHWER CO., 82H Elm St., Westfield, Mass.

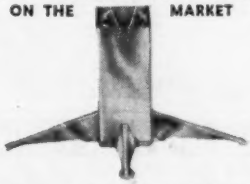
REFRIGERATORS MODERNIZED

AUTOMATIC DEFROSTING

PLUG "MAGIC DEFROSTER" into electric outlet—set and forget. Less than 5 minutes is all it takes to turn your old refrigerator into a modern box with automatic defrosting. "Magic" does not thaw frozen foods. Defrosts while you're asleep. One year factory guarantee. Try one now without risk on our 7 day money back offer. Only $9.95 postpaid or 2 for $18.95. They will make fine Christmas Gifts.

T. C. DAVIS, Distributor
P.O. Box 742, Dept. P1, Oakland, Calif.

FINEST CHRISTMAS TREE HOLDER ON THE MARKET



GRIP-A-TREE

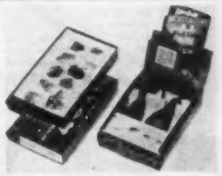
You'll thank the day you answered this ad! Works like magic; you can set it up in 15 seconds without screws, bolts or wire. . . . Just put the tree in the stand—it's actually as simple as that. Powerful jaws grip the tree straight and secure. Holds any conventional size Christmas tree. . . . All steel construction, weight 4 lbs.

Only $2.98 *(Postpaid when money or check sent with order)*

10-day money-back guarantee

HILCO ENGINEERING CO.
GENOA CITY, WISCONSIN

Rock Collector's Hobby Kit



See the breath-taking hidden fluorescent colors in rock specimens with this Model H Mineralight hobby kit 110 Volt AC. Mineralight has a replaceable bulb that lasts more than a thousand hours. Rock specimen kit includes 10 of the most exciting fluorescent rocks. Enjoy this hobby that combines outdoor fun and exercise with indoor education and interest now. Complete set only $15.00.

Additional rock specimens $2.50 a set.
Model H. Mineralight $12.50.

ULTRA VIOLET PRODUCTS, INC.
145 Pasadena Ave., South Pasadena, Cal.

DRAFT-PROOF YOUR CAR

Stop car door, trunk and cowl vent drafts, leaks and rattles. Easy to apply. Each package contains 10 feet of weatherstripping, enough for one door or one trunk. Exact factory replacements—state year and make of car.

For doors ..... $1.50 per 10 ft. box
For trunks ..... $2.00 per 10 ft. box
Cowl vent gaskets ..... 50c each

ACCELERATOR AND HEEL PROTECTOR PAD

Slips over original pedal on all cars. Protects mats and pedals from wear. No tools to install. Non-skid tread.

Protector pad . . . $1.00 each
Send check or money order—we pay postage.
Jobber and dealer inquiries invited.

H.D.R. Products, Box 85
Gravesend Station, Brooklyn 23, N.Y.

Fil-Mar 15-Piece
DRUM SANDER KIT

KIT COMPLETE $3.95

Fil-Mar Sander Drums fit any type of equipment with ¼" or larger chuck. 5 sizes in expanding-type drums and 10 sanding sleeves, 1 fine and 1 coarse for each drum size. Will sand or grind wood or metal. Postpaid if check with order, or specify C.O.D. and pay the postman.

You Get:
5 Sanding drums
5 Coarse Sleeves
5 Fine Sleeves

Money Back Guarantee!
10-Day Free Trial!

Postpaid if Check or Cash Accompanies Order

BOB'S TOOL HOUSE P.O. Box 6, Dept. 12 Cuyahoga Falls, Ohio

Cut Metal, Wood or Plastic with this NEW **CARBIDE LATHE CHISEL**

Two of these chisels do work of regular set of turning tools. Cut metal, wood, plastics free hand on your wood turning lathe. Plated shank. Long cutting life. Easy grip handle of hard maple. Sharpens on regular grinding wheels. Send Money Order or Check today!

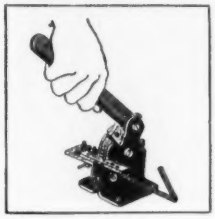
$4.00 each Sent Postpaid

• No. 18—⅛" Sq. Nose
• No. 28—⅛" Rd. Nose
• No. 14—¼" Sq. Nose
• No. 24—¼" Rd. Nose
Complete set of 4 ..... $15.00

H. A. MILHAUPT CO.
407 E. Michigan Street
Dept. PH Milwaukee 2, Wis.

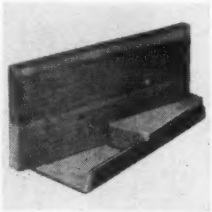
CHRISTMAS SHOPPING *with the editors*

Combination Bench Tool



Virtually four tools in one for metal working, it punches, shears, forms, and rivets. This clever development is both simple and sturdy, and easy to operate. Makes an excellent gift for hobbyists and craftsmen; basic equipment for radio repairs and metal shops, garages, bicycle repair shops, model manufacturers, experimental laboratories. Price $6.95 postpaid. A. J. Tatu Co., 85 Columbia Drive, Dept. 2, Williamsville 21, N.Y.

Speedie Bench Vise

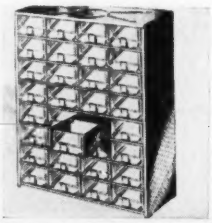


A gift every handyman, workshopper, or carpenter will appreciate. It's an all-metal aluminum bench vise and stop. Can be bolted to any work bench or carried in a tool chest. Will take boards paper thin up to 3¼" wide and 10' long. Holds with a vise-like grip for planing, sawing, sanding, drilling, etc. $1.95 postpaid. Barron Tool Co., Inc., 800 Architects Bldg., Detroit 1, Mich.

Hammer-Screwdriver Combination

Here's a handy 6-in-1 tool: hammer, nail puller, and 4 screwdrivers inside hammer handle. Each screwdriver suits a different size job. Hammer is made of cast malleable steel, screwdrivers of finest machined brass and steel with knurled handles and hardened tips. Overall length 8¼". Handy for home, shop, farm, hobby, car. Expertly machined; guaranteed workmanship. $1.25 postpaid, c.o.d. or cash with order. Ray M. Patrick, Dept. 1-HC, R.R. No. 1, El Reno, Oklahoma.

See-Thru, Convenient Storage Cabinets



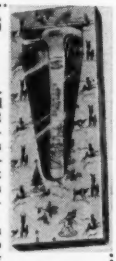
Perfect storage for small parts, tools, drills, screws, nails, seeds, photo supplies, etc. Cabinets of heavy welded steel with gray baked enamel finish in five sizes, from 16 to 64 drawers. Lifetime-guaranteed drawers of clear, see-thru plastic, 2¾" x 1⅜" x 5⅞" can be divided into 3 crosswise or lengthwise compartments; index cards in front of each drawer. 32 drawer model sells for $12.95 postpaid. Buehl & Associates, 80 W. Bowery St., Akron, Ohio.

NEW AUTOMATIC DEFROSTER

ONLY $7.95—YOU MAKE UP TO $4.00 ON EVERY FAST SALE. New low cost attachment converts any old style refrigerator into automatic defroster in 10 seconds! Just plug in. New guaranteed HOLWIN at $7.95 breaking all records. Men selling up to 10 and 12 a day and more—pocketing as much as $4.00 cash on every sale! Sells 4 out of 5 calls. FREE—Rush name for free sales kit and offer of Demonstrator Sample.

DEFROSTER SALES CO., 415 N. LaSalle St.
DEPT. H-80-T. CHICAGO 10, ILLINOIS

CHENEY SILVER KING
Nail Holding Hammer
Pride of the Tool Chest



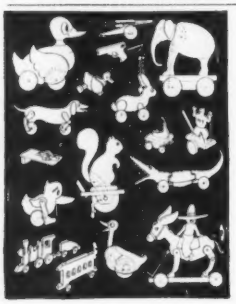
The finest hammer made. Full polished head, polished even back of the eye and the claw. Long, double tapered eye strengthens and protects the white hickory handle and keeps it wedged tight. Handle fits the hand for relaxed, tireless nailing.

Hammer face and claws tempered separately to do best work. Head carefully balanced on handle to insure full power blows with the least effort.

The exclusive Cheney Nail Holding Device permits one-handed driving of nails in overhead or side positions, saves time and effort.

Price $4 inc. Christmas box, postpaid.

HENRY CHENEY HAMMER CORP.
Little Falls, New York



Make Toys for Fun or Profit

15 FULL SIZE PATTERN OF FAST ACTION TOYS | Only $1.00

Make these colorful toys for your kids, friends' kids, and to sell. Just as attractive as toys selling at $2 to $5. Simply trace patterns on wood and cut out. Painting is easy, following instructions supplied. Toys included: Toy Dog with Moving Legs—Baseball Player Who Tosses Ball from One Hand to Other—Hopping Bunny—Waddling Duck—Seal that Balances Ball—Alligator with Pivoted Joints—Elephant with Moving Head and Trunk—Rubber Band Action Toy Cannon and Bean Shooter—Goose with Moving Neck—Silhouette Train—Creeping Turtle—Squirrel with Flipping Tail—Donkey that Sits Down—"Goofy" the Strutting Jaybawker.

Clip this ad and mail with Dollar Bill TODAY. Send dime for new catalog. SATISFACTION GUARANTEED.

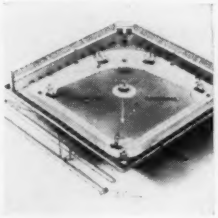
CRAFTPLANS 1321 S. Michigan Avenue Dept. P. 210, Chicago 5

CHRISTMAS SHOPPING with the editors

Mexican Saddle Stool

This little stool comes from the high hills near Mexico City. Fashioned by native hands, should add beauty and utility to living room, playroom, patio, porch. Carry it on hunting trips, to the beach, on picnics, to athletic events, parades. Made of thick top grain cowhide, strongly sewn, with sturdy bamboo legs and a cowhide clasp and carrying handle. Excellent gift. $5.95 postpaid. T-C-D Distributors, P.O. Box 742, Dept. P1, Oakland 4, Calif.

Magnetic Action Baseball Game



Features pitching, batting, catching, base-running, fielding. Life-like baseball figures move around the diamond with no hand touching them. Complete with colorful green and buff playing field and bleacher background, sturdy wood frame and metal legs. Size 18" x 18". Two magnetic control rods with lifetime Alnico magnets. Six plastic baseballs. Directions and rules of play. Price $4.95 postpaid. Magic Products, 157 Pine Road, Hammonton 77, New Jersey.

Accuracy at a Low Price

Timex Ladies' Petite or Men's Coronet watches at $12.00 are beautifully designed—attractive enough for dress; rugged enough for work or play. Shockproof, with modern V-Conic movement so watch cannot be overwound. Extreme accuracy results from Armalloy bearing surfaces ground to two one-thousandths of an inch. Ashley's, Dept. D, Box 1109, Chicago 90, Ill.

Kit for Rock Collectors

Ultra-Violet Products, Inc., of 145 Pasadena Ave., South Pasadena, Calif., offers this kit of fluorescent minerals and a Model H Mineralight, which will last more than a thousand hours, to use in identifying rock specimens and minerals. The Mineralight is an ultra violet "black light" which brings out the fluorescent colors of rock specimens, giving them a jewel-like beauty as well as aiding identification. Complete set $15.00 postpaid. Additional mineral specimens $2.50; the Mineralight $12.50. Four rock specimens are included with the light.

BLACK PANTHER

Here for your perpetual enjoyment we present a true masterpiece of the potter's art. This savage beauty has been portrayed in every detail on long lasting high-fired English clay and glazed in gleaming black, hand decorated in real 18-karat gold and re-fired for permanency. Has simulated jewel collar and gold chain from collar to foot. A truly outstanding piece to fit all types of decor, stunning for office and reception room also.

Two popular sizes and prices postpaid, and satisfaction guaranteed any place in the U.S.A.

If you want several for Christmas gifts just tell us where and when and we will do the rest with your compliments enclosed.

Large, 22"x11" high.....Just $9.95 ppd.
Small, 19"x9" high.....Just $5.95 ppd.

Free catalog of other unusual gift items on request—Please order early.

MAKAMING, Box 387, Dept. PH, FONTANA, CALIF.

BELLS of St. Nicholas

They're Electronic They swing, they sway; Just plug them in To hear them play!

Acclaimed on television as the newest Christmas decoration in a generation.

SENSATIONAL! They bring new life to decorations on trees, wreaths, fireplaces. They ring electrically and automatically, without attention; produce a musical Christmas tinkling. Made of colorful phenolic and metal, each bell is 2" high, suspended on an electronic unit, complete with wiring. Have unlimited life and are approved by Underwriters Laboratories. Free circular on request.

4-bell unit.....$4.98
3-bell unit.....$3.98
Postpaid

STAR OF BETHLEHEM

Electronic, twinkling . . . For Christmas tree top; for windows or other display. Size 8½" x 8½".
Each.....$1.98

UNDER TREE COVERS

Hand painted plastic; non-inflammable
Each.....$1.59

PERSONAL TOUCH GIFTS Dept. H
3974 S. Vincennes - - Chicago 15, Ill.

Estwing UNBREAKABLE TOOLS

HEAD CAN'T FLY OFF
GENUINE LEATHER GRIP
PERFECT, PERMANENT BALANCE

"A GIFT HE WILL USE"

At Your Dealer's • Write for Free Catalog

ESTWING MFG. CO., Dept .H, Rockford, Illinois

The Hi-Speed "Spandrel"

MOST VERSATILE UNIT OF IT'S KIND-AGAIN AVAILABLE

PRECISION BUILT AND ENGINEERED TO PERFECTION

Rugged and Tough for Long Hard Useage.

SHAFT 10" x ½ DIA. HEAVY CAST BODY
HI-SPEED BALL BEARINGS
½ x 20 THREAD for STANDARD JACOBS CHUCK

. . Do Not Miss This Bargain . .

$12.75 Complete — 25% Deposit C.O.D.

It's uses are too numerous to mention here.
It's value far beyond it's cost . . . . . .

Included!! Complete Instructions To Build

• GRINDER • DRILL PRESS • TABLE SAW • ROUTER
• SHAPER • DISC SANDER • LATHE • BUFFER

USING THE HI-SPEED SPANDREL

PRODUCTS DEVELOPMENT CO.
2789 ANDREW AVE. HAMILTON, OHIO

CHILDREN'S FAVORITE A KIT KAT CHAIR

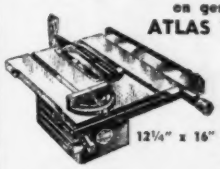
Full-size pattern of popular, easy to build Junior chair. Chair is 21" high. pattern 35c

Bargain package of other useful, original Junior Furniture Patterns—5 patterns .....$1.00.

TOM TOT FURNITURE
Dept. C, Box 741, Helena, Mont.

GIANT SALE!

on genuine ATLAS TOOLS



8" Bench Saw ONLY $27.75

12¼" x 16" tilting table

4" JOINTER • only $24.75

Shipments are collect express. Send check or money order to

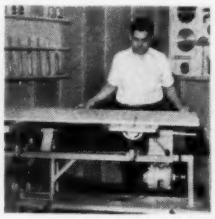
ATLAS MACHINERY CO.
*608 Arch St., Phila. 6, Pa.

CHRISTMAS SHOPPING *with the editors*

Unusual Christmas Tree Holder

Grip-A-Tree is the answer for many dads, who enjoy Christmas but dread putting up the tree. This ingenious device sets up in 15 seconds, according to the manufacturer. No screws, bolts or wires needed. Weight of the tree itself actuates powerful gripping jaws. Will accommodate any conventional size Christmas tree. All steel construction. Weighs 4 lbs. Price $2.98 postpaid when cash is sent with order. Hilco Engineering Co., Genoa City, Wisc.

Power Tool Workshop



"Supershop," a multi-purpose machine combines five basic power tools in a single operating unit: 8" tilting table saw, 30" lathe, drill press, disc sander, grinder. Numerous accessories expand utility, just as with individual machines. Features rugged uni-steel fabricated chassis, balanced pivot mounting, ball bearing operation, safe-lock tool mount. Rugged, accurate. $79.95 price includes Supershop, drive belt, 3-step pulley. Motor, bench, attachments extra. Power Tools, Inc., 542 Yates Ave., Belcit, Wisc.

Drum Sander Accessory Kit

Does he have a portable electric drill? Then he'll appreciate one of these 15-piece drum sander kits. These units fit any ¼" or larger chuck. Has five sizes of expanding type drums with a fine and coarse sanding sleeve for each. The ideal drill accessory, and certainly an ideal gift for a drill owner. Sands wood or metal. Price $3.95 postpaid. Bob's Tool House, P.O. Box 6, Dept. 12, Cuyahoga Falls, Ohio.

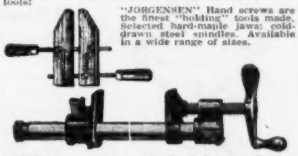
Christmas-Boxed Cheney Hammers

Every craftsman knows the meaning of "Cheney" on a hammer handle. He appreciates the full-polished head which is polished even back of the eye and under the claw. The nail holding device which facilitates one-handed driving of nails, is especially helpful. Non-slip white hickory handle contoured to fit the hand. Face and claws tempered separately. Head carefully balanced on handle. Packaged in special Christmas box and priced at $4 postpaid. Henry Cheney Hammer Corp., Little Falls, N. Y.

IF HE HAS A "SHOP"—
he probably needs more CLAMPS!

"Jorgensen" and "Pony"

Clamps provide "extra hands" for every kind of craft. They are built for "industrial" service. They are economical. And they are real "helpers". The craftsman you have in mind will appreciate these most useful tools!



"JORGENSEN" Hand screws are the finest "holding" tools made. Selected hard-maple jaws; cold-drawn steel spindles. Available in a wide range of sizes.

"PONY" Clamp Fixtures make ideal, fast-operating bar clamps on any length of ¾" black pipe. No tools required to assemble them onto the pipe—easily removed from one length to another. Hold securely—release easily—will not crush the pipe.

"JORGENSEN" and "PONY" "C" Clamps are made in a wide range of styles and sizes—for the lightest model work up to the heaviest requirements in wood and metal-working.

Write for Free Catalog
Specify "JORGENSEN" and "PONY" Clamps from your Dealer

ADJUSTABLE CLAMP COMPANY
"The Clamp Folks"
415 N. Ashland Ave., Chicago 22, Ill.

PERFECT GIFT for a WORKSHOPPER

HAMMER-SCREWDRIVER COMBINATION

This handy hammer and screwdriver combination is a 6-in-1 tool — hammer, nail puller, and four screwdrivers (inside the hammer). Each screwdriver is fitted for a different size job.

Hammer is rugged, made of cast malleable steel which is known for its durability. The screwdrivers are made of the finest machined brass and steel with knurled handles and hardened tips.

Overall length is 8¼". The handyman will find plenty of use for this tool around the home, shop, farm, car, hobby.

Expertly machined; workmanship guaranteed. Price only $1.25.

RAY M. PATRICK
Dept. I-HC, RR. I, El Reno, Oklahoma

New BELT SANDER ONLY $10.95

Stationary and Portable

Ideal all-purpose sander for home or shop! Stop-Fence Unit adjusts to 4 positions—tilts to 45°. Sturdy aluminum construction. May be powered by electric motor, drill, lathe, etc.

Send for **FREE** *circular now!*

JOHNSON Mfg. Co., Dept. 6, Lincoln Park 7, R.I.

BEAUTY ...and the BEST!

Colorfully Christmas wrapped

"YANKEE" No. 233H Spiral Ratchet Screw Driver

THE COMPLETE TOOL

To be prized for years. A constant favorite . . . *recognized* for quality. Drives screws, draws screws, bores holes. Sparkling, rugged plastic handle—actually a magazine with an extra bit and three drill points. Superior ratchet construction . . . a gift "natural" the year 'round. Get it at your hardware store. North Bros. Mfg. Co., Dept. 3, 215 West Lehigh Ave., Philadelphia 33, Pa.

"YANKEE" TOOLS NOW PART OF STANLEY

THE TOOL BOX OF THE WORLD

NORTH BROS. MFG. CO., PHILADELPHIA 33, PA.

BUILD COMFORT IN ONE EVENING

Luxurious Contour Chair

If you can use a hammer, you can build this smart, comfortable, scientifically correct chair in a few hours.

Complete Kit **$34.95** f.o.b. Baltimore

All parts furnished in complete kit. Adjustable positions, plastic upholstery, four colors—red, blue, green or brown. Modern, healthful, relaxing, for den or living room. Send order, with choice of color, $5 check or money order, balance C.O.D. Money back guarantee.

Box 3701B • **BESTE CRAFT CO.** Baltimore 14, Md.

INFRARED UTILITY LAMP

For Home, Office, Shop, Garage, Farm —also Chick, Poult and Animal Brooder.

Instant heat. Saves time, trouble and money for car owners. Quickly thaws cold, damp carburetors and ignition systems. Prevents radiators from freezing. Place under car and get quick, easy start. Protects cylinder block in extremely cold weather. Thaws frozen water pipes. Excellent for drying paint, varnish, lacquer, etc. Can brood 100 to 150 chicks and poults. Also broods pigs and lambs.

Has various therapeutic uses

All steel construction. Heavy wire guard for safety. Porcelain heat-resisting socket. Baked red enamel finish. 110-115 Volts, A.C. Complete unit includes 250 watt, R-40 infrared reflector bulb, 6 ft. rubber covered cord and plug. **Only $3.95 plus postage.** Shipping wt. 5 lbs. Send check or money order. **Satisfaction guaranteed or money back.** ORDER ONE OR MORE TODAY.

PLEASANT VALLEY DISTRIBUTING CO.
Box 383, Dept. P. H. Park Ridge, Ill.

ACCURATE! ATTRACTIVE! LOW PRICED!

WOOD LEVELS

★ Unconditionally Guaranteed
★ Accurately Set—Inspected
★ Red Lacquer Finish

48" MASON'S LEVEL $5 POST PAID

Husky! 48 inches long! Has 2-level, 4 plumb vials. Hang hole. White plastic insets for vials. A REAL VALUE!

24" CARPENTER'S LEVELS $2 Made in U.S.A. Post Paid

Full size—precision machined! Securely set vials: 1—level, 1—plumb and 1—45°. Select kiln dried white pine with two coats red lacquer. White plastic inserts!

EXCLUSIVE FEATURE!

White styron plastic insert holds vials; thick beveled walls protect vials, prevents wood twisting!

18" $1.75 postpaid

SEND YOUR ORDER TODAY or see your dealer. Postage paid on prepaid orders.

Manufactured by

JOHNSON PRODUCTS COMPANY
1670 N. Jackson St. MILWAUKEE 2, WIS.

BARRON Drill Press TOOLS

FOR WORKSHOP AND INDUSTRIAL USES...

● Over 40 precision built woodworking tools and accessories... Hi-Speed Router Bits—Rotary Surface Sanders & Drum Sanders—Safety Shaper Cutters—Dovetail Cutters—Large Auxiliary Metal Tables—All Metal Shaper Fences—Spindle Adapters—Handy Bench Vises. Many other items indispensable for accurate, useful, versatile workshop use. Every tool sold on complete satisfaction or your money back. See your Barron Dealer. Ask for special folder—"24 Extra Uses for Your Drill Press."

ROTARY PLANER

Planes • Rabbets
Tenons • Panels
Routs • Bevels

Only $7.50 COMPLETE

FREE Workshop Guide & Catalog

AN ALL-PURPOSE BENCH VISE Only $1.95 Prepaid

All-aluminum construction. Holds long... short pieces up to 3½" wide. Slickest, handiest, low cost vise. Fully guaranteed.

BARRON TOOL CO., INC.
800 Architects Bldg. Detroit 1, Mich.

GLUE INJECTOR COMPLETE WITH DRILL

Drill in handle makes a tiny hole to heart of joint—plunger forces glue through hollow tip and hole into and around joint under great pressure. Mends furniture and toys quickly without disassembly. Model Worker's dream. Satisfaction guaranteed. Sorry, no COD's. ppd. $1.65.

ARTCRAFT PRODUCTS
Box 876L, Cleveland 22, Ohio

USEFUL CHRISTMAS GIFTS!

8 PIECE MECHANIC'S HANDYMAN'S APRON KIT a $7.00 VALUE FOR $2.45 Add .25 Postage

● Plastic Folding Apron
● Linesmen's Cutting Forged Slip Joint Pliers
● Large Plastic Chuck Handle, fits all Tools
● ¼", ¼" Normal & one Phillips Head Screwdrivers
● ¾" Wood Chisel
● Slip Joint Thin Nose Cutting Pliers. Folds to Fit in Pocket. All tools fit in clutch plastic handle

A FULL YEAR'S SUPPLY TWIST DRILLS $2 post paid

45 Hardened Tempered Tungsten Tool Steel Use in Hand or Electric Drill

Will Drill Iron, Steel, Aluminum, Wood and Plastics. Order as many sets as you wish.

Sizes 1/16" - 1/4"

17" Long

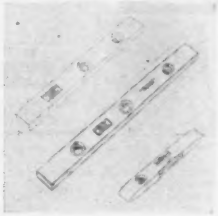
AUTOMATIC RATCHET SCREW DRIVER with 2 BITS

Open Spiral, all parts nickel plated, three way-heavy duty. Add 20c postage. Send check or money order to Dept. HC. A $6 VALUE FOR $2.25

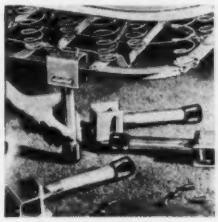
MACSON, 100 West End Ave., N.Y.C.

CHRISTMAS SHOPPING with the editors

Low Price Wood Levels



Johnson Products Co., 1670 N. Jackson St., Milwaukee 2, Wisc., offers a line of precision-machined full size levels including 9", 12", 18", 24" sizes as well as a 48" mason's level. Various combinations of level and plumb vials. Made of selected kiln-dried white pine known for its straight grain. Attractive red lacquer finish. Features exclusive molded white plastic inserts which have thick walls, and bevelled faces to protect vials and make easy reading from side or top. Accuracy and workmanship guaranteed.



Legs for Bed Spring Conversion

The trend toward modern bedroom decor, to Hollywood style beds, is responsible for the development of the Dennix Model Ball-steel bed legs. Will fit any steel spring, open coil or flat spring with round bar. 4 to a set, 8" high, aluminum finish. Attach in 5 minutes or so. Model B, $5.95 a set; Model T wood legs for wood box springs only (6 to a set) in light or dark finish $3.95 postpaid. Jore and Co., 78 Fifth Ave., Dept. 12-X, New York 11, N.Y.

Christmas Packaged Unbreakable Tools

The Estwing hunting and scout axe, and the 16 oz. carpenter's nail hammer, in special Christmas boxes, are deluxe gift items. Estwing products are noted for their balanced, one-piece construction of fine tool steel, and attractive sole leather handle-grips. The heads cannot fly off; that's a safety factor worth thinking about. Specify "Christmas package" on your order. Axe $4.50; hammer $3.65 plus postage. Estwing Mfg. Co., Dept. H., Rockford, Illinois.

Versatile Spandrel Unit

Does he like to make his own equipment? Then here's a "gift of gifts" for him—the Hi-Speed Spandrel. He'll find no end of uses for this precision-built unit which he can put to almost limitless use. For instance, with it are included plans for making a grinder, drill press, table saw, shaper, disc sander, lathe, buffer. Price complete, $12.75, cash with order or 25% deposit and balance C.O.D. Products Development Co., 2759 Andrew Ave., Hamilton, Ohio.

NEW SURFACE CLAMP

FASTENS ON THE TOP OF YOUR WORK BENCH—WOOD OR METAL

Today's best hit for home craftsman or shop. All-purpose clamp fastens to either wood or metal surface with patented "under-lock." Simple, easy installation any place on surface you choose. Clamp slides on or off without tools. Leaves bench top clear of obstructions when not in use. Swings to any angle. Holds vise-like. New! Different! Hundreds of uses. Assures better work, easier. Guaranteed. Illustrated instruction sheet sent.

3" size—$3 each, postpaid
2 for $5.00

HENRY CASTON
788 YALE ST. AKRON 11, OHIO

ACE TOOLS

$26.95
No. 8A TOOL SET

With an ACE Tool Set, you will be *permanently* tooled up for every operation on your metal-cutting lathe... 8 drop forged tool holders (as illustrated) with high speed steel cutters, blades and tool wrenches in a fitted steel case—nothing else to buy.

No. 8A Set for 9" and 10" Swing Lathes. $26.95
No. 6A Set for 6" Swing Lathes $22.83

If your local Industrial Distributor does not carry ACE TOOLS, order direct.

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5250 W. Armstrong Ave., Chicago 30, Ill.

NOW! You Can Make True Corners
THIS NEW EASY WAY!

WITH THE
BELRUSS
CORNER-CLAMP

Now it's easy to make your own screens, picture frames, storm sashes, and do hundreds of other mitered-joint jobs . . . quickly and accurately. The rugged Belruss Corner-Clamp firmly grips two sides of the frame or corner—holds them in position for nailing, fastening, or gluing. The threaded clamp foot "holds without crushing." Order today at the present low, low price.

$2.00 POST PAID
West of Rockies—20¢ additional for postage

JESSOP'S P. O. Box 1036, Oak Park, Ill.

HANDY FLEXIBLE SHAFT

With 1/8 Inch Adjustable Chuck

Converts any motor, drill press, electric drill, electric fan (10 inch or larger) into a handy rotary tool.

Attach ROTA-SHAFT in a jiffy.

Use for grinding, polishing, sharpening, cleaning, engraving, making tools, carving on metal, plastic, wood, leather, glass. Handles tools from zero to 1/4-inch diameter. 40-inch overall length. Complete with buff and sanding disc ready to use in a drill press chuck. ORDER TODAY!

SEND NO MONEY! Mail your order. Pay postman only $3.95 plus postage on delivery. Try 10 days—if not delighted return for money back.

For use on motor—35c extra for Special Coupling. Give exact size of motor shaft diameter.

ONLY $3.95

OLD FAN MOTOR

VACUUM CLEANER MOTOR

Strader Products Co.
Dept. G-117
259 Strader Ave., Cincinnati 26, Ohio

HOBBYISTS! SHOPMEN! Special ONLY $54.50

PALMGREN "HOBB-E" Rotary, Index, Milling Table—Ideal for Model Parts or Shop Work

Mill - Grind - Drill - Index - Rout curved or straight-Rabbet and Mortise on drill press or lathe. 8" Table, 4" Cross Feed, 360° Rotation. Accurately Graduated. Bolts to Table. Order NOW! SAVE $100. Only $54.50. Less Rotary Feed $39.75.

CHICAGO TOOL & ENGINEERING CO.
8402 South Chicago Ave., Chicago 17, Ill.

Write for Circular

HI-SPEED COPE-SAWDRILL-RIT
DRILLS SAWS REAMS
INTERNATIONAL TWIST DRILL CORP.

IDEAL AS A XMAS GIFT

DRILL, SAW, REAM . . metal, pipe, wood, plastic, Transite, etc. Use with any electric drill, slow drill press, lathe or milling machine. Drills own starting hole—upper part of bit is used to cut, saw or ream circles, ovals, squares or scrolls. Easy to operate. Ideal for carpenters, mechanics, electricians, plumbers, hobbyists, many others. Abrasive resistant, high speed steel. Flutes ground from solid. Will withstand severe continuous use without breaking. Reshargened at no charge. Takes place of up to $50 in tools. 1/2" diameter, 2" cutting sections, total length 3 1/2". Also available specially designed for wood or metal and in 2 1/2" and 1 1/2" lengths. Write for details. Specify all-purpose bit. Shipped same day. Money-back guarantee. Dealer inquiries invited.

SEND CASH, CHECK OR MONEY ORDER

Manufactured and distributed by:
INTERNATIONAL TWIST DRILL CORP.
818 Wyandotte, Rm. 689, Kansas City 6, Mo.

only $3.95 POST PAID

CHRISTMAS SHOPPING with the editors

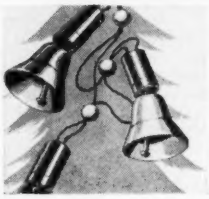
Two Volumes on Furniture Building

"How To Build Modern Furniture" by Mario dal Fabro (Volumes 1 and 2) are suggested as suitable gift items for home workshoppers. Being offered for gift purposes at $9.50 for both volumes. Covers all phases of furniture construction, materials, design, joinery, finishes, assembly, tools. Features picture method of instruction. Photos, drawings and exploded diagrams make 65 furniture projects easy to build. F. W. Dodge Corp., 119 West 40th St., New York, N.Y.

Contour Chair in Kit Form

Here's one for the handyman around your house—all the parts already precision-cut for one of those luxurious contour chairs. So if you don't have a contour chair because of its high cost, here's your answer. Can be assembled in an evening with ordinary tools. All parts furnished. Has adjustable positions; vinyl upholstery in red, blue, green or brown. Complete kit $34.95 f.o.b. Baltimore, Md. $5 with order, balance c.o.d. Beste Craft Co., Box 3701B, Baltimore 14, Md.

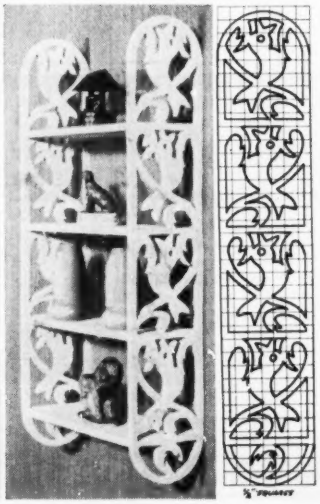
Electronic Christmas Ornament



We've seen these "Bells of St. Nicholas" musical bells and we like them. You hang them on the tree like lights, plug them into an electric outlet—and then listen to them play as you watch them sway back and forth. They're a really new note for trees, doorways, fireplaces. Beautifully made of phenolic and metal, 3 and 4 bells to a set. UL-approved. 4-bell set $4.98; 3-bell set $3.98. Personal Touch Gifts, 3974 S. Vincennes, Chicago 15, Ill.

THE HOME OWNER section of the next issue of *Homecraft* will feature "How to Waterproof Your Basement", by associate editor Frank Culhane. Basement dampness is a universal problem in both new homes and old, and Mr. Culhane reviews thoroughly the methods and materials which home owners can handle themselves. Don't miss this dollar-saving feature.

BIRD DESIGN WALL SHELF By CARL SORENSEN



HERE'S a new and novel design for a wall shelf. As shown in the photograph, jigsawed birds perched on smoothly curving branches form a highly decorative pattern. Quarter-inch plywood is used for making the shelf.

Enlarge the pattern for the side pieces to the proper size by means of the squares, transfer the pattern to wood, and jigsaw to shape. Depending on the capacity of your jig saw, two pieces—or four, for a pair of matched shelves—may be sawed at the same time. If two or more pieces are to be sawed in one operation, brad the pieces together through the waste material before starting to saw.

The shelves measure 3½" x 8", four being required for each wall shelf you make.

Sand all edges and faces thoroughly, then assemble the pieces with glue and brads. Set the brads and fill the holes with wood putty.

Finish as desired. The wall shelf shown was painted flat white. A stain and varnish finish may also be used.

PULL-TOY Sleds

By ROBERTA L. FAIRALL

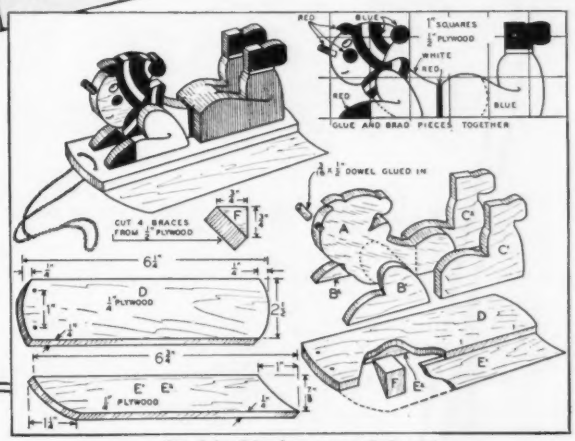
Doll and sled pattern and method of assembly.

MAKE these two appealing pull-toys from small scraps of ¼" and ½" plywood, a ½" length of 3/16" dowel, two screw eyes, two screw hooks; cord, glue and brads.

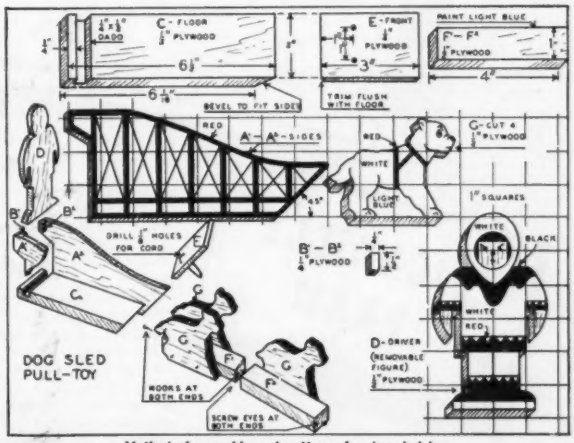
DOLL AND SLED: Draw the design for the doll on paper which has been ruled in 1" squares for accuracy in enlarging; then trace the five pieces to ½" plywood and jigsaw out. Measure the members for the sled directly on the wood and cut section D, E^1 and E^2 from ¼" plywood. Cut four braces, F, from ½" plywood. Drill section A and glue in the dowel nose; then brad and glue the doll together. Drill holes at the front of section D for the pull cord, brad and glue D down to the runners E^1, E^2; then brad and glue D to the doll, driving the brads in from underneath. Finally glue in the four braces, F.

DOG SLED PULL-TOY: Draw the designs for the driver, dogs and the sides of the sled on paper first. Trace the driver and dogs to ½" plywood, the sides of the sled to ¼" plywood, and jigsaw out. Measure the other sections directly on the wood as shown in the illustration and cut. Turn in a small screw eye in each end of section F^2 and a small screw hook in each end of F^1 and brad and glue two dogs to each side of these pieces. Brad and glue sections B^1 and B^2 to the inside of the side sections. Drill section E for cord; then assemble C, E, A^1 and A^2.

Paint the figures with poster paint directly on the raw wood. This paint is an opaque water-color sold in small jars at stationery or art supply stores. It dries in a few minutes. One color may be applied over another and it may be used on any porous surface. Therefore, no filler may be used on the wood. After the colors have dried, brush on two coats of thin white shellac. Tie a bright cord to the doll's sled and one to the front of section F^2 of the dog sled, tie a loop of cord in the front of the dog sled, set the driver in place, hook F^1 to the cord in the sled, hook F^2 to F^1 and you will have two amusing little toys.

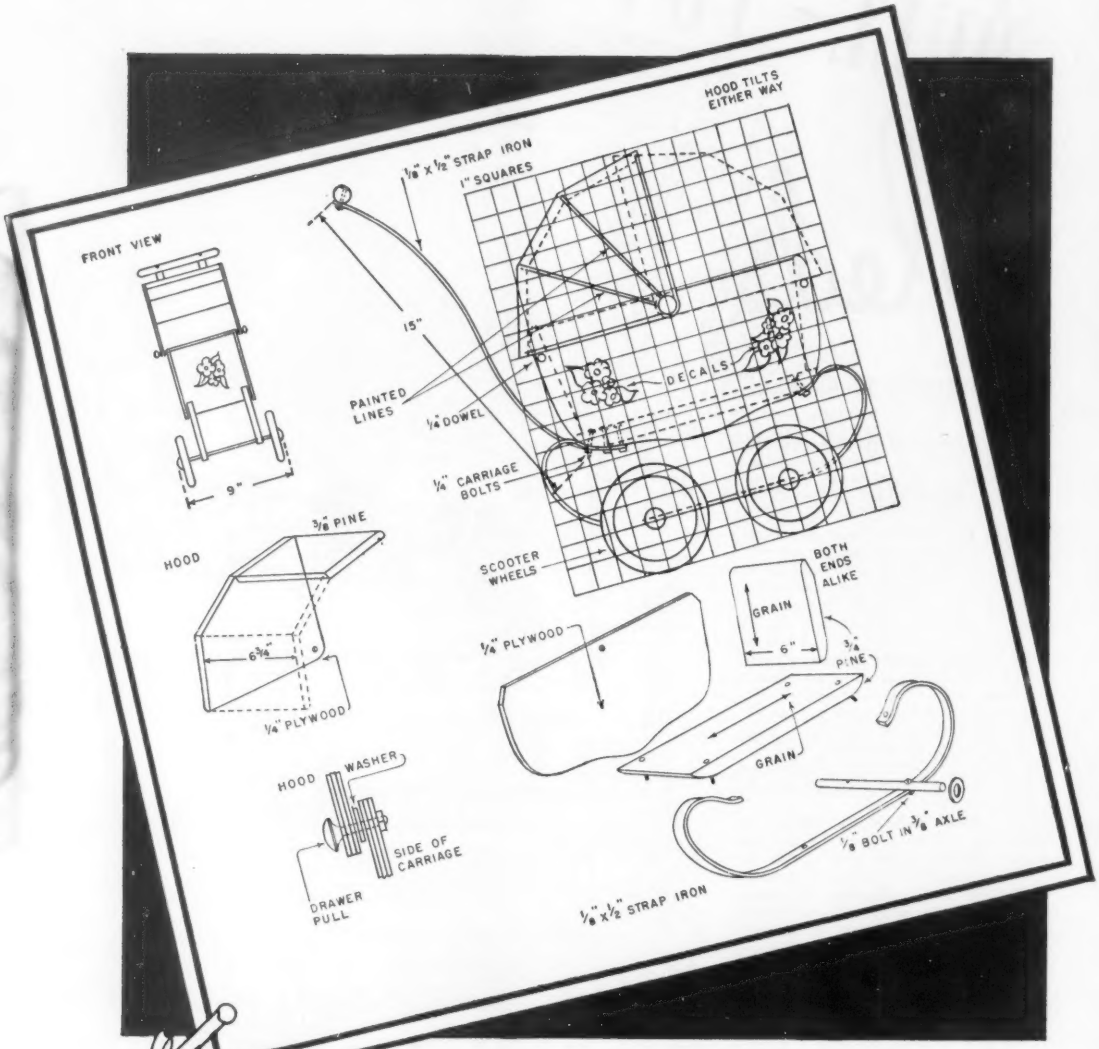


Dog sled pull-toy from scraps of plywood.



Method of assembly and patterns for dog sled toy.

LEAVES FROM HI SIBLEY'S



PICADILLY PRAM

THIS little doll carriage is designed along the lines of the popular English-type perambulators, characterized by the small wheels and proportionately large body.

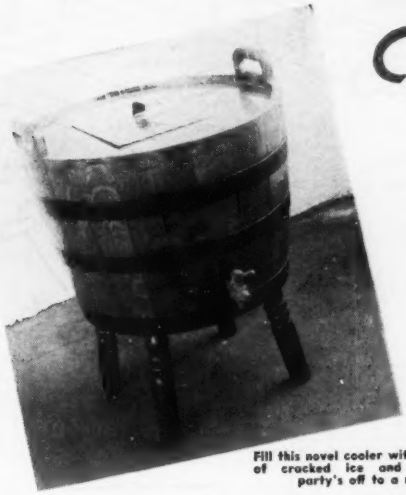
Construction is so simple that the entire project can be built with ordinary hand tools, a coping saw used in place of a scroll saw, if the latter is not available, for cutting out the curved parts of the sides. Wheels are metal disk-type such as used on sidewalk scooters and are obtainable at most toy stores.

Springs and handle-bar supports are strap iron bent around a rough wooden form nailed to the workbench. Assemble sides to ends and bottom with glue and brads, bolt on the springs to which the axles are bolted. Paint any color of your choice and add decal decorations.

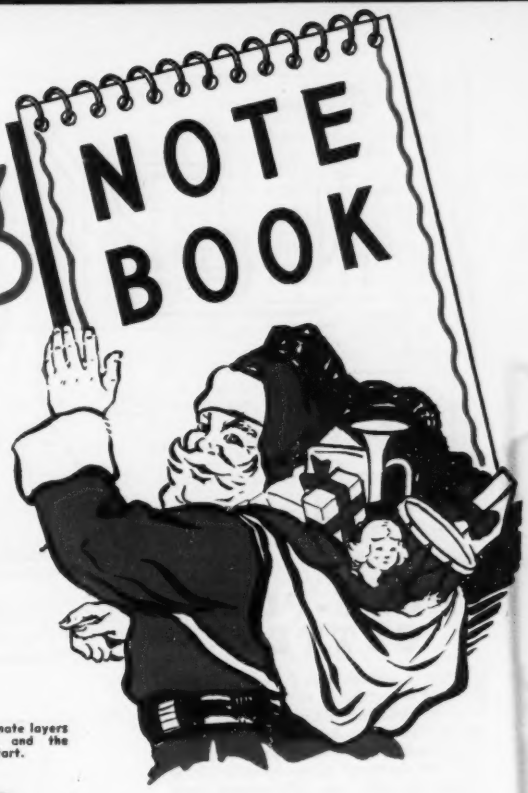
BILL OF MATERIALS

1 pc. plywood	1/4" x 12" x 22" sides, hood
1 pc. pine	3/4" x 6" x 21" bottoms, ends
1 pc. pine	3/4" x 6" x 11" hood
1 pc. strap iron	1/8" x 1/2" x 70" springs, handles
2 pcs. steel	1/8" x 9" axles
4 scooter wheels, 4 1/2" diameter	
2 drawer pulls	
1 dowel 5/8" x 9" handle bar	
8 carriage bolts 1/4" x 1"	
Glue, brads, decal designs	

Christmas NOTE BOOK



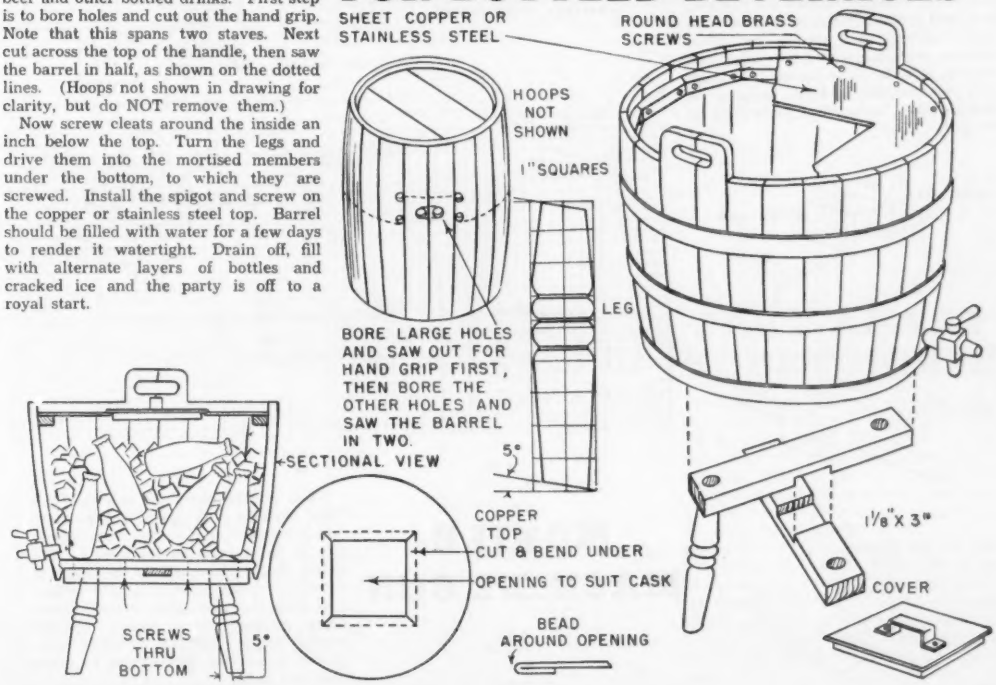
Fill this novel cooler with alternate layers of cracked ice and cokes and the party's off to a royal start.

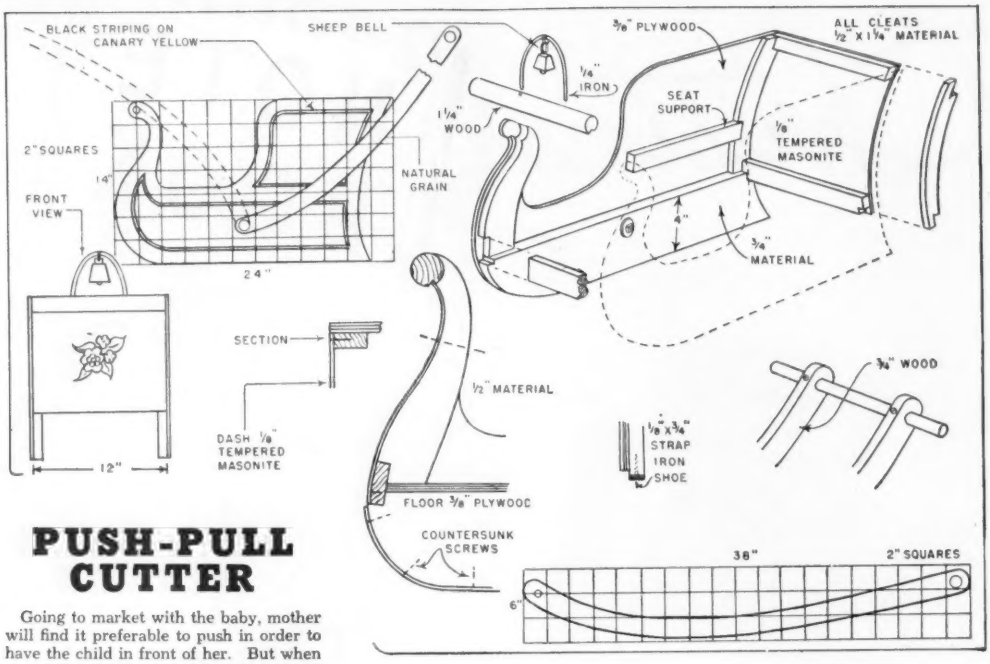


ICE TUB FOR BOTTLED BEVERAGES

An oak cask or barrel cut in half, provided with sturdy legs and a copper top, makes a handsome cooler for Cokes, root beer and other bottled drinks. First step is to bore holes and cut out the hand grip. Note that this spans two staves. Next cut across the top of the handle, then saw the barrel in half, as shown on the dotted lines. (Hoops not shown in drawing for clarity, but do NOT remove them.)

Now screw cleats around the inside an inch below the top. Turn the legs and drive them into the mortised members under the bottom, to which they are screwed. Install the spigot and screw on the copper or stainless steel top. Barrel should be filled with water for a few days to render it watertight. Drain off, fill with alternate layers of bottles and cracked ice and the party is off to a royal start.

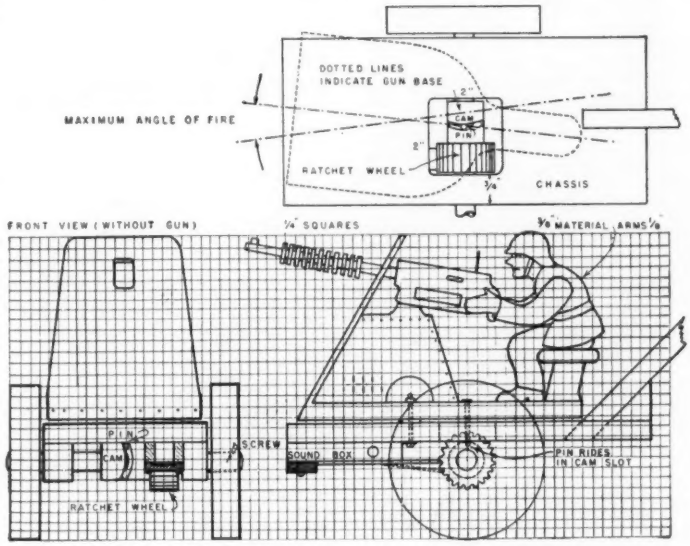


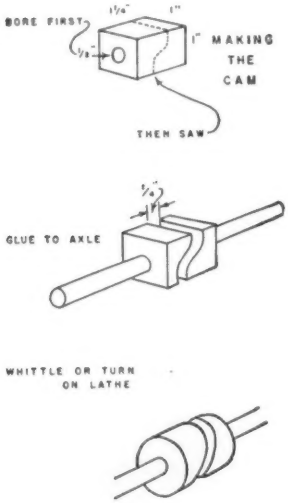


PUSH-PULL CUTTER

Going to market with the baby, mother will find it preferable to push in order to have the child in front of her. But when the children take Junior out for a spin, they like to play horse and pull the sleigh.

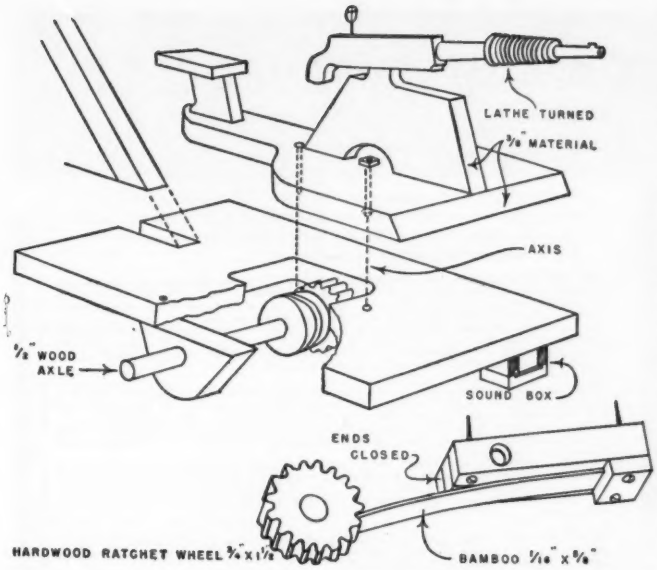
As the drawings show, construction is simple; the sides are scroll-sawed from outdoor plywood reinforced with cleats. The curved dash and back are made of 1/8" tempered hard pressed board. Runners of 3/4" material support the plywood floor, and are shod with strap iron. Use water-resistant glue on all contacting surfaces, especially between sides and runners, in addition to screws. A snappy paint combination is black striping on canary yellow, and a decal decoration on the dash.





MOBILE MACHINE GUN

When pushed along the sidewalk this little machine gun gives out a sharp "rat-a-tat-tat!" as it swings from side to side in its advance on the enemy. The sound effect is produced by the action of a bamboo splint tapping rapidly against a box on the underside of the chassis, being actuated by a wooden ratchet wheel. A pin riding in a wood cam-groove causes the gun mount to move back and forth.



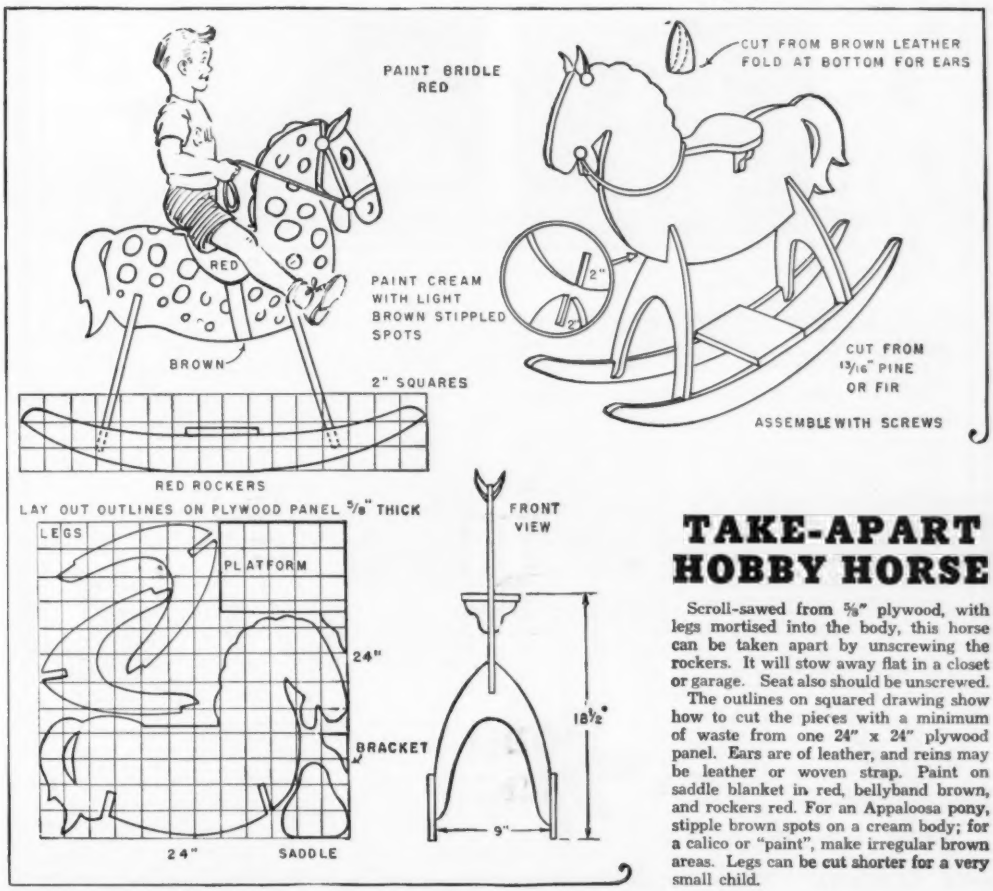
Construction is simple, axle, bearings and all parts being of wood, assembled with glue and small screws. Soldier is scroll-sawed in one piece, with separate arms glued on. Barrel of gun with fins is lathe-turned, or a plain barrel can be whittled with a knife and inserted in the breech section.

To make the cam, bore a block of white pine for the axle, then saw as indicated on the dotted lines. Next glue on the axle after separating the two pieces 1/4", and round the block into cylindrical shape. The ratchet wheel should be of hardwood, and the bamboo splint clamped firmly over the sound box, which is closed at both ends but has a hole in each side.

Sandpaper the axle smooth and apply wax so it will turn freely. It should be of hardwood. Paint the completed job olive drab, with flesh color on soldier's face and hands, brown belt and shoes.

MATERIAL LIST

1 pc. white pine 1/2" x 4 1/2" x 20" chassis, gun
1 pc. white pine 3/4" x 4" x 5" soldier
1 pc. Masonite 1/8" x 4" x 7" arms, gun shield
1 dowel 1/2" x 6" axle
1 pc. hardwood 3/4" x 4" x 9" ratchet, wheels, bearings
1 pc. hardwood 3/4" x 1" x 20" handle (push bar)
1 pc. bamboo 1/8" x 5/8" x 4" (at model airplane stores)
1 bolt 3/16" x 1 1/4" axis
1 pin 3/16" x 1 1/2" for cam
1 pc. white pine 1" x 1" x 1 1/4" cam
Screws, glue, paint



TAKE-APART HOBBY HORSE

Scroll-sawed from 5/8" plywood, with legs mortised into the body, this horse can be taken apart by unscrewing the rockers. It will stow away flat in a closet or garage. Seat also should be unscrewed.

The outlines on squared drawing show how to cut the pieces with a minimum of waste from one 24" x 24" plywood panel. Ears are of leather, and reins may be leather or woven strap. Paint on saddle blanket in red, bellyband brown, and rockers red. For an Appaloosa pony, stipple brown spots on a cream body; for a calico or "paint", make irregular brown areas. Legs can be cut shorter for a very small child.

CHRISTMAS TREE ORNAMENTS FROM TIN CAN (1)

BY

ELSIE WALTERS

Tree decorations from tin cans add sparkle to your Christmas tree. These decorations are unbreakable, fireproof and have plenty of "glitter."

As the holiday season approaches, save some of the tin cans you'd ordinarily throw out—sardine cans, small pineapple or baby food cans, and a few of the larger size ones (No. 2½ and the No. 10 or near gallon size). They'll make sparkling holiday decorations.

DRUMS—The smallest cans combined with bright felt make charming little drums. Cut two felt circles ½" larger in diameter than the diameter of the can. Punch holes around the circumference of the two circles, ¾" apart and ¼" in from the edge. Lace together by passing yarn or colored cord through the holes and draw the lacing taut. Or a large darning needle threaded with the lacing material may be used to lace the drum heads together. Tie the two ends of the lacing together in a square knot, then knot the free ends into a loop for hanging on the tree. Drum sticks may be added by padding the burnt ends of matchsticks with cotton covered with felt.

STARS—Sparkling stars, circles, crescents, other shapes may be cut from the flattened tin cans. A can with a gold enamel lining is especially suitable. Cut off the two ends of the can, then cut along the seam to open and flatten. Prepare a paper pattern for the shape you choose. Hold the pattern on the tin and mark around the outline of it with a sharp instrument such as a nail or ice pick. Cut out with a tin snips or pair of old heavy household shears.

For extra interest make a raised design around the edge by laying the tin piece on a board, holding a nail in position and giving a sharp tap with the hammer. Do not pierce the tin. The impressions are spaced evenly about ¼" apart and the same distance in from the edge. Drive the nail through the tin at one point and add an ornament hanger or string loop.

ICICLES—Cut strips of tin ⅛" wide and 12" long. Wrap spirally around a wooden penholder or similar tapered stick. Bend back the top of the strip to make a loop through which a string for hanging may be passed.

Sardine cans make shadow boxes for Christmas candle figurines. Cutout figures and scenes from last year's cards might be substituted for the candles.

Letters shaped from tin strips spell out your holiday message on mantel or bookshelves. Or you may attach them to your door wreath with fine wire.

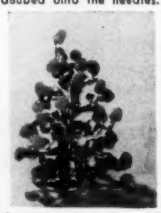
REFLECTING BOXES—Sardine cans make bright reflecting boxes for little plaster or wax candle figurines. Shave the backs of the figures if they are too wide, so they will stand inside the cans. Or use cutouts from old Christmas cards in these 'frames.' Set up one, two or more of the boxes, back them with a row of candles and a pyramid of greenery.

POINSETTIA—Flatten a tin can and lay out the pattern for the upper and lower flower sections. Cut out and punch holes through the center with a nail. Cut stems from a strip of tin for the stem, ¼" wide and 6" long. Slit one end into four sections for the depth of ¼". With a pair of pliers, pinch the stem into a fold along the entire length below the slit top. Bend out the four slits at right angles to the stem and slip the lower end of the stem through the two flower sections, pushing them up against the slit end.

To keep the flower sections from slipping down on the stem bend a slight crook into the stem just below the flower head. Cut three leaf sections and pinch the stem together as you did the flower stem. Plant the flower and leaves by pushing them into a lump of modeling clay which has been pressed into the bottom of the container. If you wish a larger plant with several blossoms, make some of the stems longer and cut more leaf sections.

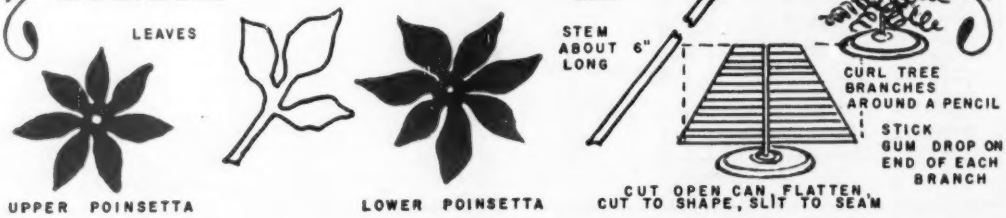
Make a silver poinsettia plant with one or several flowers. Each flower is made of two sections slipped on the stem one above the other.

LETTERS—The size of the strip depends on the height of the letter. Strips ⅝" wide and 6½" long are right for letters 2" tall. Most letters will stand alone but a few may need to be Scotch taped to a cardboard base. Evergreen branches provide an attractive background. The evergreen may be left natural green or frosted with white shoe polish daubed onto the needles.



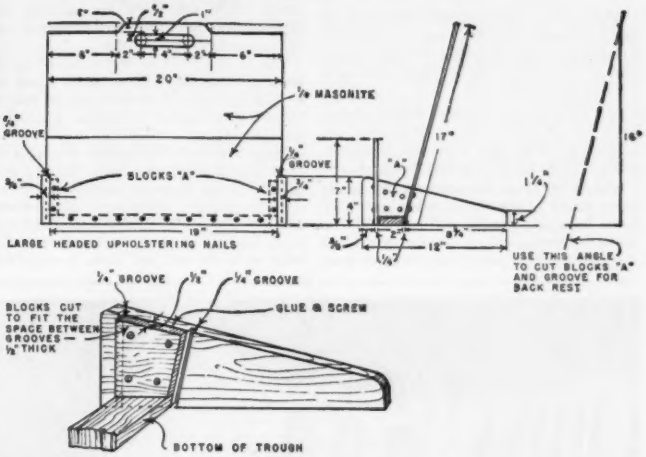
A sugar plum tree will fascinate the small folks. Make it as large or as small as you wish, with a gumdrop pushed onto the end of each spiral branch.

SUGAR PLUM TREE—Beginning at one side of the can seam, cut around the bottom to the other side of the seam. Cut through the can from top to bottom at a point just opposite the seam and flatten the tin. Now cut the can in strips on both sides of the seam, making the strips about ⅛" wide. The can seam serves as the trunk of the tree. Wrap each strip spirally around a pencil. Arrange the 'branches' around the 'trunk.' The bottom of the can serves as a standard. On the end of each branch push a small gumdrop.



PORTABLE MAGAZINE RACK

By ORVILLE GRISIER



HERE'S a good looking, easily made, portable current magazine rack that will hold from 12 to 20 large-sized magazines. It sits firmly on the floor, and can be picked up and moved about.

The front and back are made from 1/4" Masonite. A good grade of plywood also might be used. You can paint front and back any color to match the tone of a room.

The base is made of 3/4" material. Both sides can be cut from a single 6" x 12" board, so some of the better woods will not be too expensive. The Masonite back is 20" wide by 17" high, including the hand hold. The front is 20" wide by 7" high. Cut according to the dimensions.

After the baseboards have been shaped, cut grooves 1/4" wide, 3/4" from the fronts. These should be 1/4" deep in the clear, and at a right angle to the bottom. The rear groove is of the same size and is 2" from the front groove measured on the bottom side of the base. Set your bevel T-square to an angle of 4" and 16" as shown. This angle is used to mark the rear grooves and the end pieces of the trough.

The trough is made of 1/2" material and measures 19" from end to end. The ends should fit exactly within the grooves and should be glued and screwed to the bases.

After the base and trough have been assembled, slip the Masonite for the front and back in place to be sure everything fits; remove for painting and finishing.

After the finish is dry, replace the Masonite in the grooves and tack with long upholstering nails every 2".

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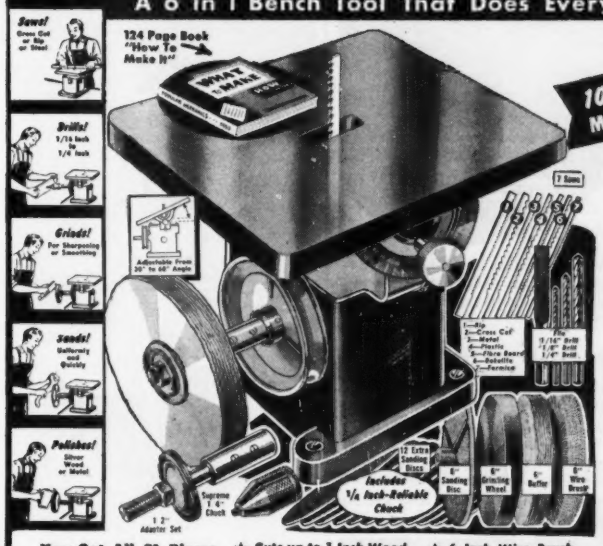

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BY ORVILLE GRISIER

The back is made from a ½" strip of wood 4" wide and 26" long. If there are more than four members in the family, add 4" for each. Or if there are only three, subtract 4".

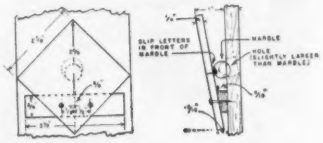
Cut the diamond-shaped pocket fronts from ¼" Masonite or plywood 2⅞" on each side. This will give you a square with a diagonal of approximately 4".

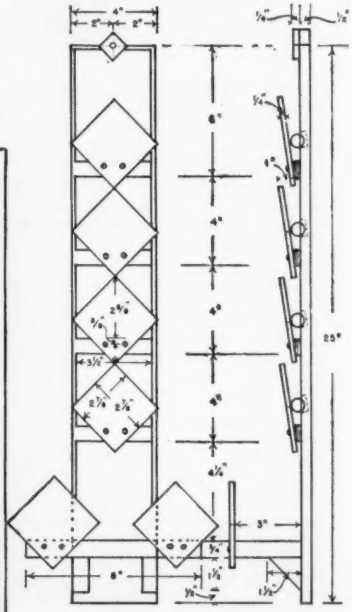
The bottoms of the pockets are made from strips of wood ¾" wide and 3½" long. Take a piece of ¾" wood, 16" or more in length, and scribe one side 5/16" and the other ¼" and plane to these lines along the entire piece before cutting it into 3½" lengths.

Space these pieces as shown in the drawing. They can be held in place with brads while the holes for marbles are being made and the pocket fronts are being marked for position.

The marbles will hold the letters more securely in a draft. The hole is made on a slightly upward angle and is just a little larger than the marble you have selected.

Make a pencil mark across the back of each pocket front 2⅝" from the top and parallel to the diagonal, as shown. Three-eighths inches below the line, draw another line, and locate and bore the holes for screws. Spot the location of the holes with an awl, and bore through the bottom strips. Place the marble in place and screw the pocket front in position.





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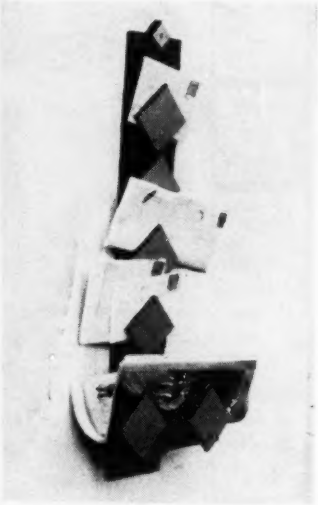
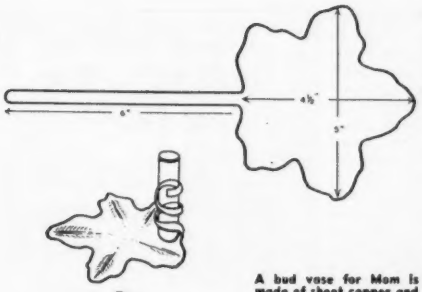
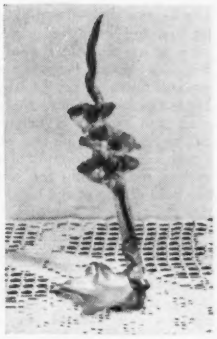


The bottom shelf is 3" wide and 8" long. The pocket fronts should be positioned by a line 2⅝" from the upper corners, exactly as on the single fronts. Small angular brackets beneath this shelf are advisable.



By
ELMA WALTNER



A bud vase for Mom is made of sheet copper and a small test tube. The vases may be used singly or in pairs.

Mom would like a bud vase; a pair would make her twice as happy. The one illustrated was cut of sheet copper but aluminum, plastic or other materials would serve equally well. Lay out the pattern on the copper and saw out, using a fine-toothed metal cutting blade in the jig saw. Use a pair of pliers to bend the points of the leaves upward to give a bit of natural curl to the leaf. Line the plier jaws with cloth to protect the metal from being marred by the plier jaws.

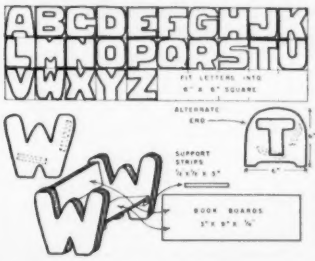
The body of the vase is a small size test tube, available at most drug stores. Choose a wood dowel the same diameter as the test tube and use it as a form around which to curl the long leaf stem. Polish the copper with fine steel wool to a bright finish and protect from tar-

SMALL GIFTS FOR THE FAMILY

WANT to make a quickie gift for Mom, Dad, Sis or Bud? Here are several suggestions for hurry-up presents which may be made from odds and ends around the shop.

A bracelet made of narrow sections of a variety of fancy woods would please Sister.

An initial book rack is a nice gift for Dad or big brother. Most of the letters of the alphabet lend themselves easily to block form.



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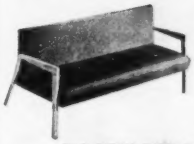

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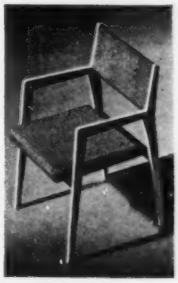

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nishing by coating with plastic finish which is transparent but will keep the copper from turning dark.

Sis would like a bracelet with her initials burned into one of the sections. This item needs only small scraps of wood and is most appealing if each section is made of a different kind of wood. Cut eight pieces of wood ¼" thick, ¾" wide and 2" long. Sand until the blocks are satin smooth. Round off the four long edges with sand paper so they will not be sharp. Drill two small holes through the width of each block about ¼" in from each end. Burn the initials of the recipient on one of the light-colored blocks with an electric burning needle or a heated ice pick. To finish the blocks, use shellac, applying enough coats so that the wood has a glassy finish. Be sure to use fine steel wool on the blocks between coats to give an absolutely smooth finish. After the last coat of shellac is thoroughly dry, apply two coats of wax and rub to a bright hard finish. String the nine blocks on thin round elastic, sewing the ends of the elastic together and slipping the sewed ends into the hole of one of the blocks. Nine blocks are right for an average-size wrist. Use more or less blocks to get the proper fit.

An initial book rack for Dad or older brother will be a welcome addition to a chairside table. The initials are of ¾" stock in any desired hardwood. Golden oak, finished natural, was used for the

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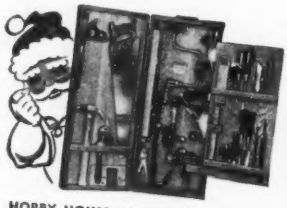

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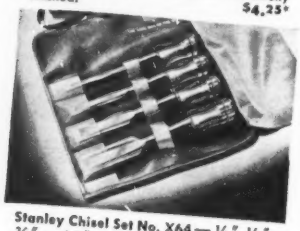

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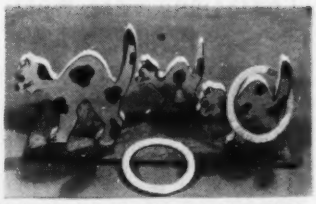
rack illustrated. Most of the letters of the alphabet, cut thick and blocky, can be used alone. There are a few, however, which will not stand up because of narrow bases. For these initials the rack ends are cut of ¼" stock and the initials, cut out of contrasting wood, are glued to the ends. In this case a thinner wood should be used for the initials. The book rack boards are ¼" plywood stock and the supports for the rack boards are ½" square strips 3" long. Nail the rack boards to the support strips; then fasten the support strips to the insides of the initial ends with screws about 1" long. Racks should be fastened to the ends so that the books fit in at a slight forward tilt to keep them from tipping out back-



Make a cat ring toss board for the small fry. Rings are rubber jar rings wound with crepe paper, then shellacked.

wards. Finish the rack with several coats of shellac, rubbed down between coats,

(*Continued on page* 124)

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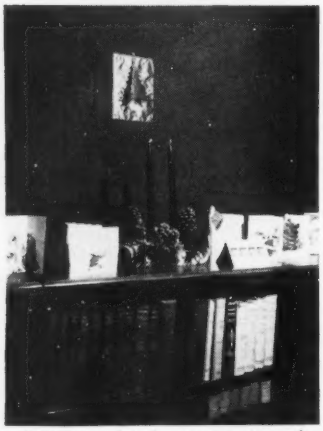


FIGS. 1 and 2 show two patterns for the tree. Each pattern shows only half the completed tree. A duplicate of either is needed to make a tree that really stands out—three-dimensionally as well as decoratively.

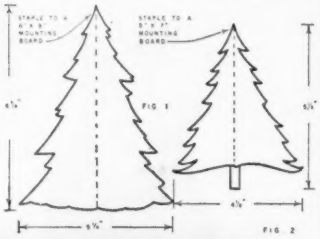
Cut two trees of either pattern—or both, for variety—and, after preparing the mounting, staple one of the pair on its mate along the center line and into the mounting as well.

The tree shown in Fig. 1 is not symmetrical; that is, the foliage is not alike on both sides of the center line. So if you wish you can reverse one of the cutouts of this pattern when you attach it to its counterpart and so achieve a little freer expression.

A suitable mounting can be made from a piece of fairly stiff cardboard covered with red metal foil. The foil used by florists for wrapping about potted plants at Christmas is the very thing.

Now, touch dabs of mucilage at random to the tree and drop on a few of the trimmings used for decorating cakes. "Glitter" (tinsel) will look well. Don't forget the gold or silver paper star for the tree top.

For hanging the plaque use one of the cloth tabs, already coated with adhesive, made for this purpose.—J. F. Alstad.



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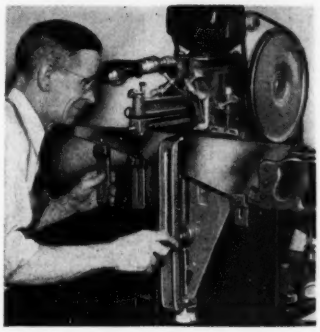

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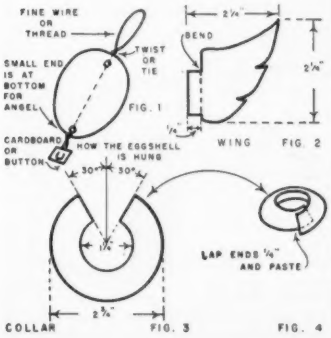
Pick a small hole in the shell at each end and blow the contents into a cup. Run water through the eggshell to wash it out.

You'll need something to hold it to the tree, and to hang onto while you're dressing it for its role. So next, cut a short length of fine copper wire or a piece of strong thread, run it through the shell, fasten a button or small square of cardboard to the end of the wire or thread protruding from the narrow, or small end of the shell (which will be the neck of the angel). Tie a loop in the other end for hanging on the tree. Fig. 1).

Next paint the face, using poster color or other water paint. The features can be simplified—mere indications of eyes, nose, mouth.

From stiff paper or light cardboard, cut two wings (Fig. 2). Bend back the tabs, apply mucilage, and press them lightly to the shell at each side of the face, as shown in the photo. Be careful not to press hard or you'll shatter the shell!



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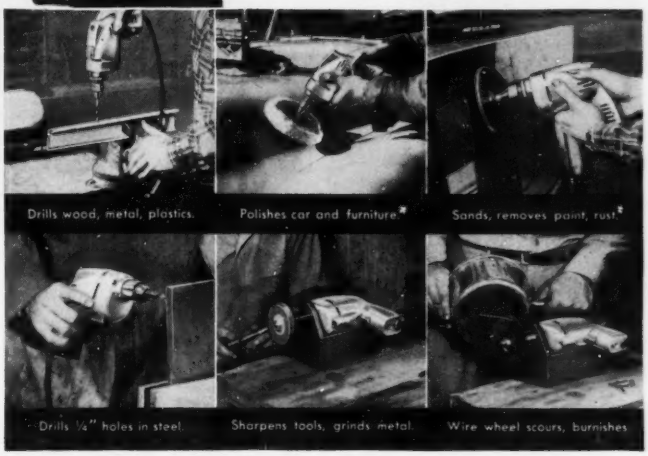

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Now pull out a tuft of cotton in a strip, dab mucilage along the shell at each side of the face and across the top and press the cotton onto the adhesive lightly.

A collar is made as shown in Figs. 3 and 4. Fasten it to the shell by short strips of cellulose tape across the bottom of the shell.

While you've got your materials working, string a few other eggshells for hanging and paint them to suit your fancy. They make novel tree ornaments. —J. F. Alstad.

SANTA CLAUS AND HELPER TREE ORNAMENTS

A brown egg is best; the color will give the old boy an appropriate weather-beaten look. It should be a good-size egg, to be prominent on the tree.

Pick a small hole in each end of the shell, blow out the contents (and have a scrambled egg for breakfast). After running water through the shell to wash it out, run a wire or thread through the shell, fasten a button or small square of cardboard to the end that protrudes from the big end of the shell, and tie a loop in the other end for hanging. The small end of the shell will be Santa's cap.

Now paint the features, as shown in

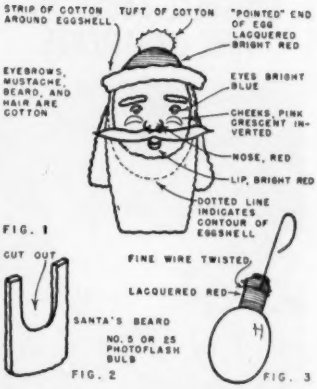

Fig. 1. You can simplify here. The cap, beard and mustache are what make Santa look like Santa.

These are cotton. The eyebrows are tiny tufts, fastened to the shell with a drop of mucilage touched to the spot with a bit of cotton twirled around the end of a toothpick. For the mustache, roll a long, narrow tuft of cotton, twist the ends tightly and pinch it together at the middle. Cut the beard from a flat strip of cotton and cut out a piece from the

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center to fit around Santa's chin, as in Fig. 2. The hair is a flat strip without a cutout portion. For the cap, roll a thin strip of cotton around the lower edge of the lacquered portion and fix it with mucilage, and add a tassel tuft to the crown.

Make a paint brush by wrapping a small wad of cotton around the tip of a toothpick and paint the small end of the shell to resemble Santa's cap (Fig. 1). For coloring use red nail polish or red model airplane lacquer (called "dope"). Hold the shell by the wire hanger a few minutes until the lacquer dries.

His helper is a used photo flash bulb. Tie thread or wrap wire around the base of the bulb just behind the contact prongs, as in Fig. 3. Then lacquer the base as you did Santa's cap. A few touches of paint will give the little fellow a face, and cotton applied as shown in the photo will add hair, mustache and forked beard.

At the same time paint a few other used flash bulbs solid red or solid green, using airplane "dope", and tie colored ribbon around the base of each. For variation, apply mucilage over some unpainted bulbs and sprinkle "glitter" over the adhesive.—J. F. Alstad.

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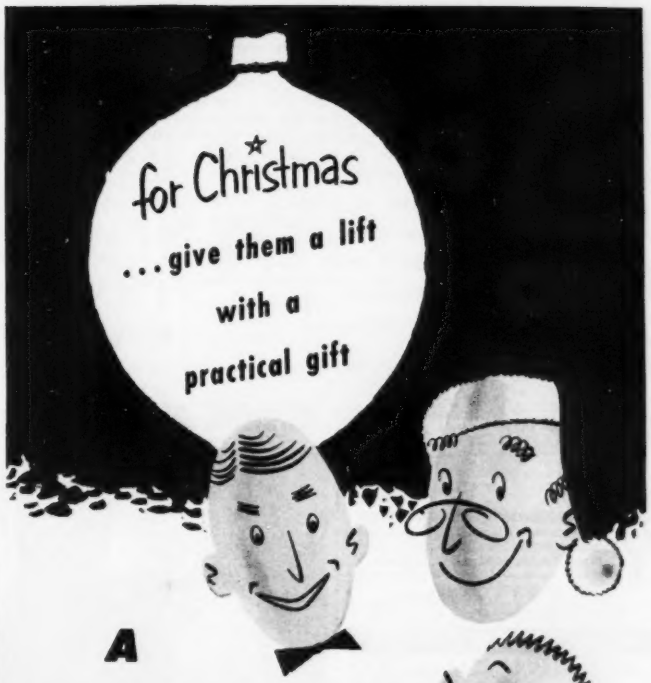
Draw the figure by following the pattern, Fig. 1. With poster color or other water paint give the old boy a cherry-red costume, leaving white the fur around his cap and along the lower edge of his jacket and sleeves. His beard and mustache, of course, are left white too.

Mittens should be green to include the twin to red as the traditional Christmas colors. Boots are glossy black.

Cut a little slit at the tip of his right-hand mitten to hold a tiny twig from a branch of your Christmas tree. It'll look like a miniature tree if you snip the needles to a point.

Before inserting the twig cut out the figure and the snow bank that forms the background, Fig. 2. Then, with mucilage



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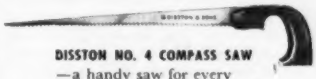

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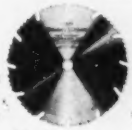

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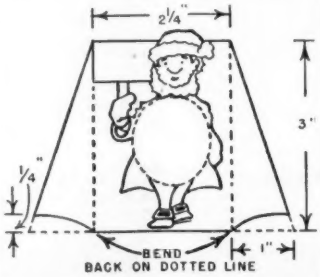
or paste, attach it to a rectangle of dark blue mounting board.

With a pointed swab of cotton rolled around the tip of a toothpick, touch mucilage here and there on the blue card and drop a few grains of "glitter" (tinsel) on the adhesive for stars. For hanging, use one of the tabs sold for this purpose in ten cent stores.—J. F. Alstad.

BROWNIE PLACE CARD

THE figure is drawn on a piece of fairly stiff cardboard or Bristol board. Dimensions are given in the sketch. Poster colors or other water paints are suitable for coloring although you may use crayon, colored pencil, or colored inks.

Coat and cap are bright red. Border and pompom on the cap are white. You may color the mittens and striped stockings as you wish; green and yellow make a good combination with red. Shoes are black, with the buckles left white to show as silver. Tint the cheeks and nose pink, and touch a spot of blue to each eye and red to mouth.—J. F. Alstad.



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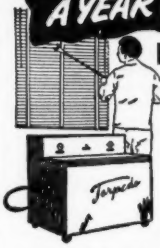

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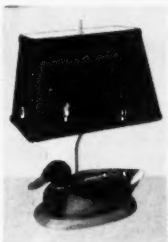

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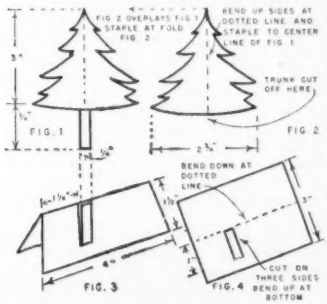
The base should be cut from fairly stiff cardboard. Bristol board (available at art supply stores) will do nicely.

From green construction paper cut out two tree patterns, one without a trunk, as in Fig. 2. Staple them together at the center line, or fasten with thread at one or two places. Notice that the tree trunk (Fig. 1) is ¼" shorter than the support cutout of the base (Figs. 3 and 4) to allow the support to overlap the foliage.

Glue or staple the tree trunk to the cutout in the base; then paint the trunk deep brown.—J. F. Alstad.



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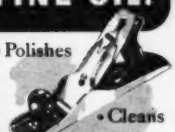

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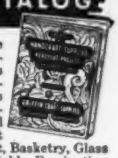

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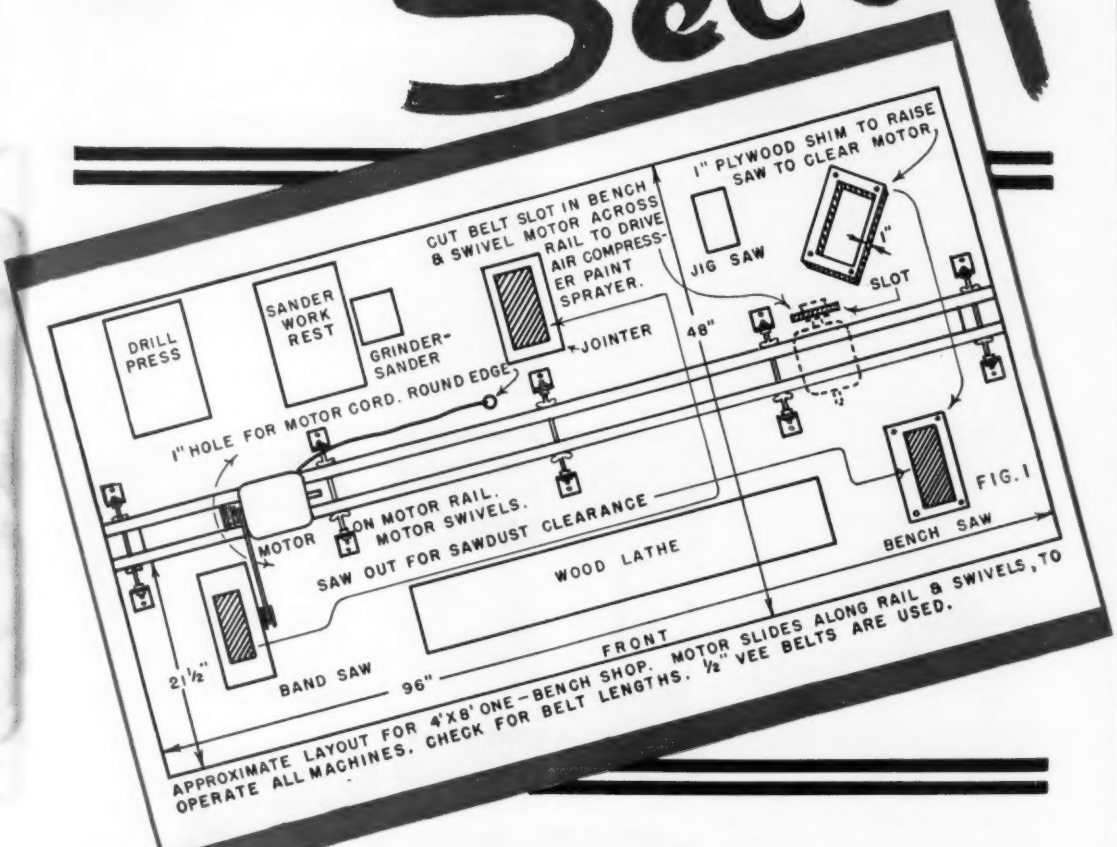


THE begi[illegible] the craftsman who cannot afford an elaborate layout, and the man who has only a limited area in which to set up his shop, will find this chapter especially helpful.

The one-bench shop illustrated here is a supplement to the one shown previously. However, instead of the standard individual motor rails, we are going to describe our own motor rail design; a rail that we believe tops them all. You can build it in your own shop.

All of the tools used on this bench, including the drill press, can be operated with one motor and without removing the motor from the rail.

The motor is bolted to a carriage that slides along the track from one position to another. The carriage is pivoted in the center so that it may be swiveled around to operate machines on either side of the bench. When positioned it is held firmly in place with a single lock-pin.

To begin, a 4' x 8' bench should be built exactly as described previously, except for the layout of the machines. Arrangement of the equipment will be slightly different to facilitate smooth movement of the motor back and forth on the track.

Fig. 1 details approximate locations of the machines used. However, build your motor rail first and attach it to the top of the bench. After that the location of each machine may be decided by the length of belts used and the distance from the track required for freedom in sliding the motor along the rail.

Fig. 2 is a detail showing how the track is made and set up. Two 8' lengths of 1½" angle iron are used for the tracks. Drill five ¼" holes through the side of each rail and space as shown. Build the two oak mounting spacer blocks by gluing the 9/16" risers to the base of each block. Then drill a ¼" hole crosswise through each to receive the ¼" adjustment rods.

Cut the ¼" x 10¼" adjustment rods and thread each end of each rod back for a length of 2⅝". Cut, bend, and drill the 10 flanges as shown. Line up and attach to the top of the bench with ¾" No. 6 R. H. wood screws.

In setting the adjustment rods in, slip a strong coil compression spring 5" long on each of the three center rods. These will force the tracks apart when the wing nuts are loosened for moving the motor.

Screw wing nuts on each end of each rod and run them up tight against the rails. Place a nut on each rod and run on just far enough so that each end of the rod extends far enough through the flange to clamp tight with a second nut on the outside (see detail in Fig. 2). The two spacer blocks are set in, one at each end of the track, and the rods extend through in the same manner as the others.

Fig. 3 is a cross-section of the end of the motor rail. This drawing shows also an end cross-section detail of the construction and assembly of the motor

A HOME WORKSHOP

Part 5

By DICK HUTCHINSON

Associate editor

carriage, which is detailed further in drawing Fig. 4. The two bed pieces are cut from ¾" oak or maple. A ⅜" hole is drilled exactly in the center of each to receive the ⅜" x 1½" carriage bolt pivot. The 2" x 3⅛" guide plate is cut from 3/16" band iron, and the 2¼" x 2¾" clamp plate is from ⅛" band iron. These are riveted together. The ⅜" pivot bolt hole is drilled in the center, and the whole assembly is attached to the underside of the bottom board of the carriage with ¾" No. 5 countersunk F. H. wood screws.

Select some suitable bolt or pin for the lock-pin and drill a hole in the front end of the motor bed board to receive it; drill corresponding holes in each end of the baseboard. This is for locking the motor in position when it is swiveled from one end to the other.

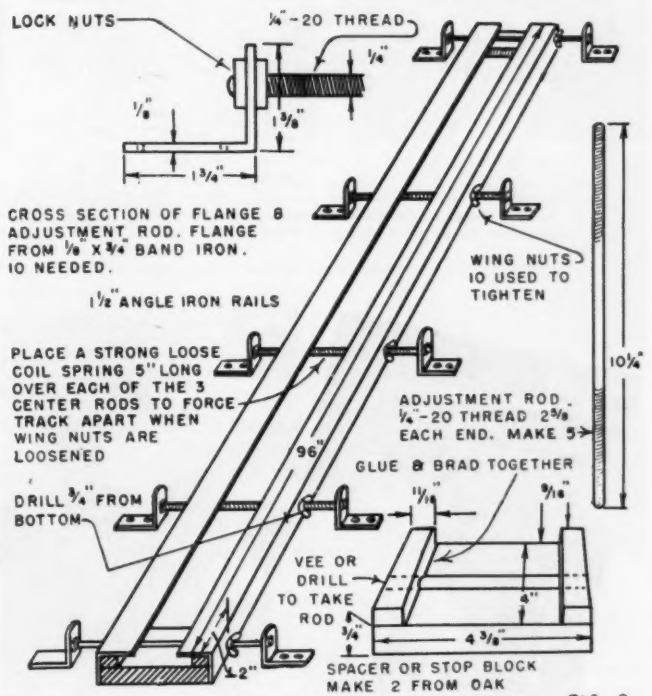
Set the pivot bolt down through the bed board, drill holes and countersink from below; bolt the motor to the bed with carriage bolts. Set the pivot bolt down through the baseboard and screw on the nut and head the bolt over slightly. Set the motor on the track by fitting the inside edge of each of the two rails into the guide on the bottom of the assembled carriage. Slide along the track to any position. Tighten the wing nuts and your motor will be locked firmly in position.

To change ends with the motor, for operating equipment on the other side of the bench, simply pull out the lock-pin, swivel the motor around and slip the lock-pin in at the other end (see Fig. 5). The motor may even be set at right angles to the rail if necessary.

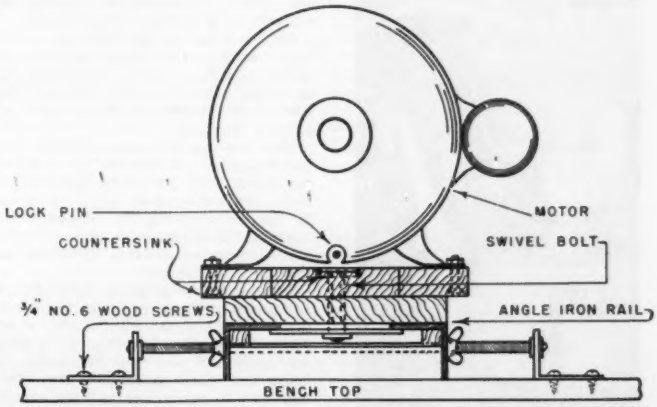
To prevent stretching belts when changing from one machine to another, pull the lock-pin and swivel the motor toward the machine and roll the belt off, move to next machine, roll belt on, swivel back to position and lock with lock-pin (see Fig. 6).

Fig. 1 illustrates how an air compressor-paint sprayer may be mounted under the bench and, by turning the motor to a right angle to the track position, a belt may be run down through a slot in the bench top to operate the machine below. This arrangement provides air for cleaning up the one-bench shop and cleaning motors, etc. It is located where it can be operated for paint spraying when the need arises.

The air compresser shown in Fig. 7 is the type machine I use in my shop. Mine, however, is set up independently as I use it all over. For our model shop only the compresser unit is required, as it is driven with the one motor on the motor rail. It is one of the most important pieces of equipment in the shop, particularly for blowing sawdust out of motors



DETAIL OF PARTS AND ASSEMBLY OF MOTOR RAIL FIG. 2



DETAIL OF CROSS SECTION OF MOTOR MOUNTED ON MOTOR RAIL. FIG. 3

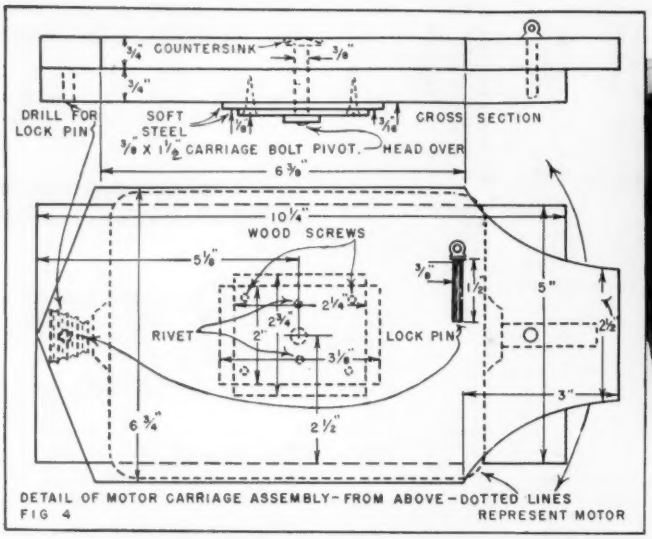


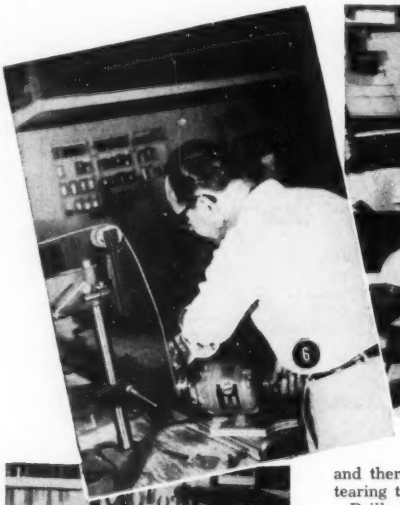
FIG 4

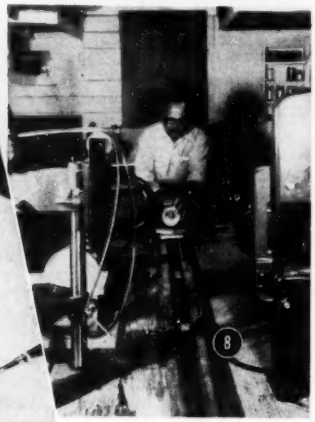
Fig. 5—Turn the motor on its pivot so that machines on either side of bench may be operated.

Fig. 6—To remove the belt turn the motor toward the machine. Then the belt may be removed without stretching.

Fig. 7—An air compressor may be hung from the underside of the bench and driven by the same motor. This compresser delivers 40 pounds pressure.

Fig. 8—Sliding the motor along the track is very simple.





and thereby eliminating the necessity of tearing the motors down for cleaning.

Drill a hole through the top of the bench as shown in Fig. 1 and run the motor cord down through and attach to a proper electric outlet. Round the corners of the hole so that it will not damage the cord.

Note that openings are cut through the bench top for sawdust clearance below the bench saw, band saw and jointer. These are indicated by shaded portions in the drawing Fig. 1. Drawers for catching the sawdust are shown in the bench construction detail illustrated in the previous chapter.

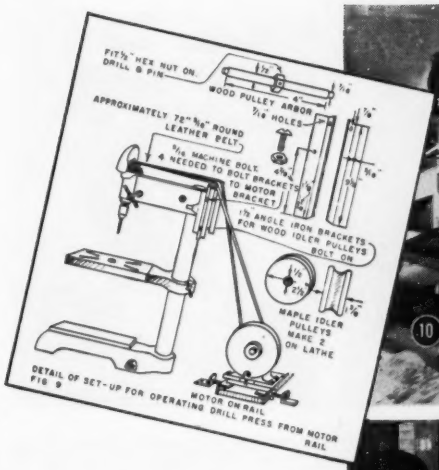
Slide your motor along as in Fig. 8 and position it behind where the bench saw is to be located. Slip on a ½" x 36" Vee belt. In this case, the top of your saw table will not clear the motor, so insert a 1" board under the saw. This will have to be cut out to form a shim like that shown in Fig. 1. Insert this under the saw and draw the belt tight. Mark, drill holes, and bolt the saw to the bench with carriage bolts.

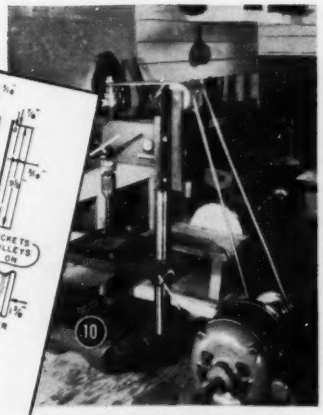
Proceed with each machine the same way. The lengths of belts may vary slightly. Better locate the machines, see that the motor has plenty of clearance for passing as it slides along the rail, then measure and purchase belts of the correct length. Also, your motor should be equipped with a four-step pulley, as all of the machines do not operate at the same speed.

All the equipment is set up easily with a direct drive, with the exception of the drill press. The drill press has a vertical drive shaft while the motor on the rail has a horizontal drive. After some experimenting we worked this out successfully and it operates as efficiently as any machine in the line.

Cut two pieces of 1½" angle iron 9½" long and drill as indicated in Fig. 9 for the two brackets. The pulley arbor is a 4½" length of ½" round steel rod. ¼" on each end is turned, or filed down. A hex nut is set in the center and a hole drilled through; the nut is riveted securely with a finishing nail. This is to eliminate friction between the two pulleys as they revolve in opposite directions.

The two maple idler pulleys are turned up on the wood lathe, drilled, and slipped on, one on either end of the arbor. The ends of the arbor are set in the holes at the top of the two bracket irons and the whole is bolted to the motor bracket on the back of the drill press as in Figs. 9 and 10. A 72" length of 5/16" round leather belt is fitted in position and drawn tight, cut and spliced together. New leather belting will stretch quite a bit,





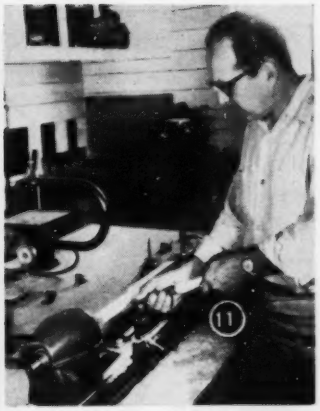


Fig. 10—The drill press set up to operate from the motor on the track. 5/16" round leather belt is used, which rides over two maple idler pulleys.

Fig. 11—Spindle turning on the wood turning lathe on the one-bench shop.

Fig. 12—Sawing short pieces on the multi-purpose machine. Note tool rack behind machine. All accessories are within reach.

Fig. 13—A job of wood turning on the multi-purpose machine.

so it will have to be shortened from time to time until the stretching stops.

Keep the idler pulleys lubricated with a heavy grease and they will wear for a long time. It is advisable to keep the tops of the two track rails greased slightly; the motor will slide along more easily on a greased rail.

The larger the area available for setting up this shop the better, for you will need a certain amount of free room to get around to all the machines. To give you some idea of how simple it is to operate equipment on this set-up we are showing a model doing some wood turning. See Fig. 11.

If desired, the bench may be set up on casters so that it can be moved about, or so that the complete shop may be moved back against the wall when not in use.

We have been asked many times for advice regarding the advisability of buying a multi-purpose woodworking machine. We have one of these machines in our own shop, which we use for experimental purposes, and have done a lot of work on it. We have studied the operation of others and find they are all well engineered, precision-built machines, capable of turning out good work.

The machine we have is built to do three specific jobs. In its horizontal position it is an 8" bench saw with a tilting table and every attachment needed to do almost anything that can be done on any 8" tilt table bench saw (see Fig. 12). In this position it can be changed over to a wood turning lathe as in Fig. 13. With the proper attachments it may be used for horizontal drilling, grinding, disk and drum sanding, shaping, buffing and polishing.

Raised to a vertical position, the machine becomes an excellent drill press adaptable to drilling, routing, drum sanding, or any job that any drill press will do. Since the saw table swings down to a 90° angle to form a table for the drill press, the fence may be used as a guide for duplicate drilling. Fig. 14 shows an operator doing a drilling job that we might term precision drilling. For example: Through the use of the fence a series of holes may be drilled in wood or metal in a straight line for any length of material required. If holes are to be drilled through the material, either insert a strip of wood under the material being drilled, or remove the saw inset to avoid damaging it.

For the man who is limited in space for his shop the multi-purpose machine is ideal. Here again, the complete shop is operated by one motor.

Through my contact with the younger craftsmen I find that many of them get as big a kick out of setting up the machine as they do actually turning out a project. Here, then, is a piece of equipment which will give these fellows something to experiment with. There is no end to what this machine will do for the chap who likes to prove the versatility of a machine. Again I say, if you need a lot of versatility in one piece of equipment that must be crowded into a small shop, you can't go wrong on any one of the multi-purpose machines. We will, as we get along with the series, illustrate many of the things that these machines will do.

Before we get too deeply involved and spend a lot of money for high priced woods and other supplies I am going to pass along a suggestion that will save you a lot of money:

Make up your mind just what you want to do in your particular shop, then begin to stock it up. "Salvage"—I have a shop stocked with materials that, had I gone out and bought them all new, would have run into hundreds of dollars. I do buy a lot of supplies at retail prices, but the materials I have salvaged over the years are worth a lot—not only in money, but in time spent to locate them.

Any kind of lumber is expensive. However, here is a suggestion: Visit your local cabinet shops, or anywhere that woodwork is being done. These places always have large scrap piles made up of short pieces of the best of lumber, all of which is usable for the homecrafter, and you usually can buy it reasonably. Recently I acquired a lot of birch plywood from a house trailer factory. This beautiful material runs from 1/8" to 1/2" in thickness and if bought

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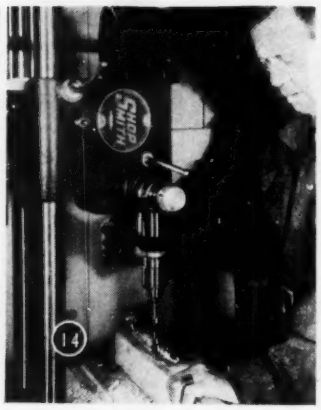

Fig. 14—Here is the saw fence being used as a guide for drilling a series of holes in a straight line.

Fig. 15—Apply glue with a brush to obtain a smooth even coat on material to be laminated.

Fig. 16—Clamping laminated plywood together with parallel hand clamps.

in sheets sells at from around 40 cents a foot on up depending upon the thickness.

In the lot I bought I have pieces as long as 4' and up to 30" wide. All of this material works out beautifully in a home workshop. Whenever I need thicker stock I simply laminate two or more pieces.

The alert craftsman will watch for factories and business establishments where merchandise is delivered in large wooden packing cases. Most places are glad to dispose of these boxes if you will carry them away. Some of the boxes are of excellent lumber.

I recently bought a large truckload of sizable pieces of clear white pine and ¾" fir plywood from a lumber mill. They delivered the load to me for $5. Otherwise they would have burned it. Clear California redwood in California sells for 25c a board foot. I discovered 200' of seconds in a lumber yard recently. I bought the lot for 7½c a foot. After cutting out the knots it still will cost me less than 10c a foot. I have made many similar deals and saved a lot of money that way.

I use a lot of small bolts and screws, and all sorts of small items. Many of these are hard to find when one needs them, so I salvage everything possible. For example, if a light socket or anything electrical goes bad, I save the parts. I have smashed many old light sockets to save the small screws with which they are put together, and as a result I have a pint jar full of them. It is almost impossible to buy these small screws. Save every small part you can get; some day you will be glad you did.

With a stock of lumber on hand, regardless of what size it is, it is possible to glue up several pieces if necessary to get just what you require for a particular job. In gluing up small parts use the woodworker's vise for clamping while the glue sets. A veneering press is excellent for clamping the smaller plywood laminating jobs, and without doubt the parallel hand clamps are used more frequently than any of the other clamps. These are a "must" in every woodworking shop.

For most of the gluing jobs around the average home workshop we find the resinous glues best, where the projects are going to be subjected to the out of doors. These glues will resist moisture for a long time without damage.

For inside work many craftsmen still use steam glue. The advantage of this glue is that the hot glue penetrates the wood to a greater depth and therefore forms a stronger bond. However, since there are so many good liquid glues available, more and more woodworkers are switching to these. Of all the liquid glues made we prefer the hide glue.

We follow the same procedure in gluing as in soldering. It is not the *amount* of glue put on; the thing that counts is *how* it is applied. Be sure both sides of the joint are smooth, even and free from any foreign substance. Apply a smooth even coat of glue with a brush to both surfaces to be joined. Press together and clamp tight. Fig. 15 shows hide glue being applied with a brush prior to laminat-

Fig. 17—Keep all your glues, Plastic Wood, pastes and fine lacquers in one place.

ing two pieces of plywood being built up to a required thickness.

In gluing thin plywood place a piece of 1" board on either side of the plywood and clamp the whole assembly. The board will prevent the plywood from warping throughout the process of drying. Fig. 16 shows how two pieces of plywood are clamped together with parallel hand clamps after glue is applied.

Resinous glue requires from 20 to 30 hours to set thoroughly. Hide or fish glue will set in from 12 to 20 hours. Fig. 17 shows how we keep our supply of glues, pastes, fine lacquers, Plastic Wood, etc., clean—always in one place and where they will not get tipped over.

With the lighter, less expensive birch, mahogany or black walnut, it is a simple matter to glue up some beautiful, heavier plywood. This is accomplished by using fir plywood for the body and gluing the better woods on one or both sides for really nice work. As illustrated in Fig. 18, birch plywood is pleasant to work with since it does not splinter when being worked.

Fig. 19 shows the author using the block plane to true up the edges of a small tool case. The plywood used in this case was laminated and the case was glued and bradded together. After assembling a case, or any other project, if there are holes where nails have been set in (or any other defects in the surface) fill with Plastic Wood. When dry, sand down smooth.

We are writing this series to help promote more interest in wood craft, and to pass along to you some of the things we have learned over the years. We want to emphasize that if there is anything we write about which you do not understand, be sure to write and tell us about it.

In the January-February issue we will discuss the layout of a hobbyist's shop, with equipment setups for woodcarving, clay modeling, metal work, leather tooling, etc.—all on one small bench. Smaller machine and hand tools with which the grade school pupil may work with safety also will be discussed.

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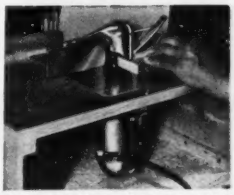

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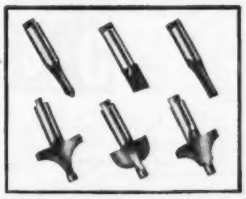

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Fig. 18—Cutting silhouette of ship model on the same type jig saw as used in the one-bench shop.

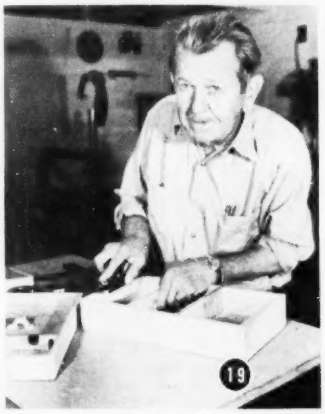

Fig. 19—The author using a block plane to put the finishing touches on a glued-up tool cabinet.

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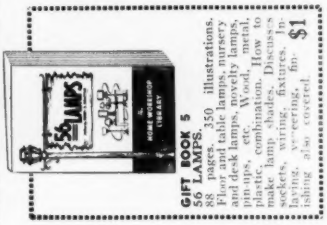

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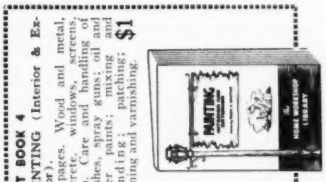

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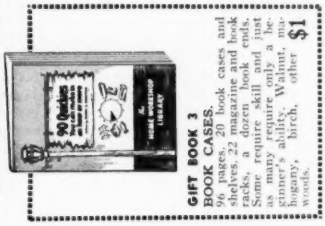

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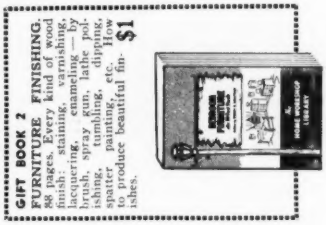

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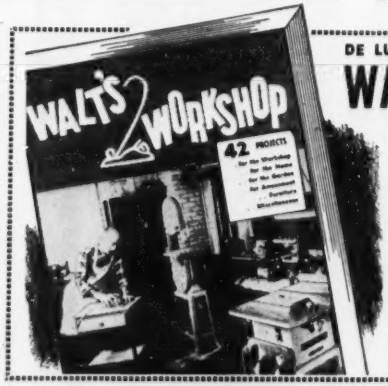

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STARTS THIS ISSUE

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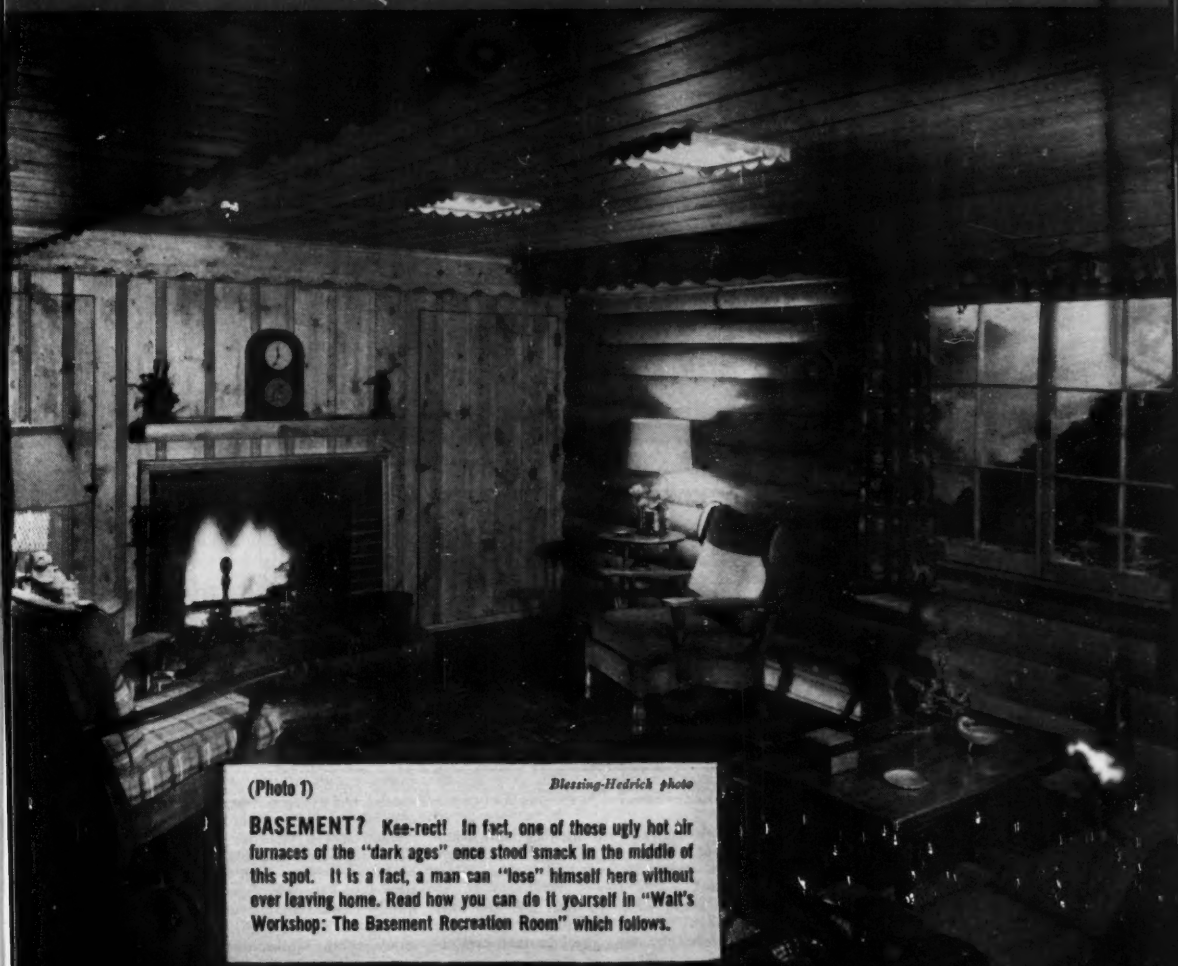
FOR THE HOME OWNER

THE HOME OWNER

A SECTION DEVOTED TO HOME REPAIRS • MODERNIZATION • MAINTENANCE • GARDENING



(Photo 1) *Blessing-Hedrich photo*

BASEMENT? Kee-rect! In fact, one of those ugly hot air furnaces of the "dark ages" once stood smack in the middle of this spot. It is a fact, a man can "lose" himself here without ever leaving home. Read how you can do it yourself in "Walt's Workshop: The Basement Recreation Room" which follows.

THE BASEMENT RECREATION ROOM

By WALT DURBAHN

THE basement and the back yard are two places where folks can provide extra pleasure for the family. Ruth and I just finished a major improvement in our back yard, but let's forget that for the time being; I will tell you what we did there at a later date. Right now I want to tell you what we did to our basement.

Ours is one of the houses that was built by the students of the Highland Park High School Building Trades classes; it won first place in the "Better Homes in America Campaign" in 1931. Well, when I designed it an extra flue was put into the chimney so that whoever might own it could build a recreation room with a fireplace in the basement. That bit of forethought paid off, all right, since we became the owners of the house! Now we have the recreation room illustrated in Photo 1 on the preceding page.

The average small house built 15 or 20 years ago had the heating unit planted in the middle of the basement, with pipes of all kinds running in every direction. Times have changed both equipment and installations. Hot air furnaces now are the warm air type with forced circulation, permitting flat duct work. Perimeter heating has placed hot water pipes around the outer edge of the basement to feed baseboard radiation; and small copper tubes with water circulators have replaced large iron pipes for hot water heat. Solid fuels have been replaced with oil and gas, adding more floor space and making a cleaner basement.

Our house, like so many built in that period, had a hot air furnace centered in the middle of the basement and a solid fuel storage bin (Fig. 1). Shortly after we bought the place in 1931 I built the fireplace, the flue already being in the chimney. We used that end of the basement for ping pong, parties, etc., and it made a nice retreat for me to do my writing and studying. The walls, ceiling and floor still were in an unfinished state until four years ago when we were able to get gas for space heating.

This meant a modern gas heating unit with forced circulation, which could be placed off into a corner in a confined area. Large round heat and return air ducts became flat ducts, placed around the outer edges of the ceiling and in out of the way places. With this done, Ruth and I now could get to work designing and planning the remodeling of the entire basement.

Fig. 2 shows the new room arrangement: the coal bin became the fruit room (Photo 3), with a small area reserved for fireplace wood. The old fruit room became the kitchen for the recreation room. A four-inch tile wall separated the utilities from the rest of the basement and in it was housed the gas space heater or furnace, water heater and laundry equipment. The plaster ceiling in the utility and outer room reduced the fire hazards which always exist in the furnace room.

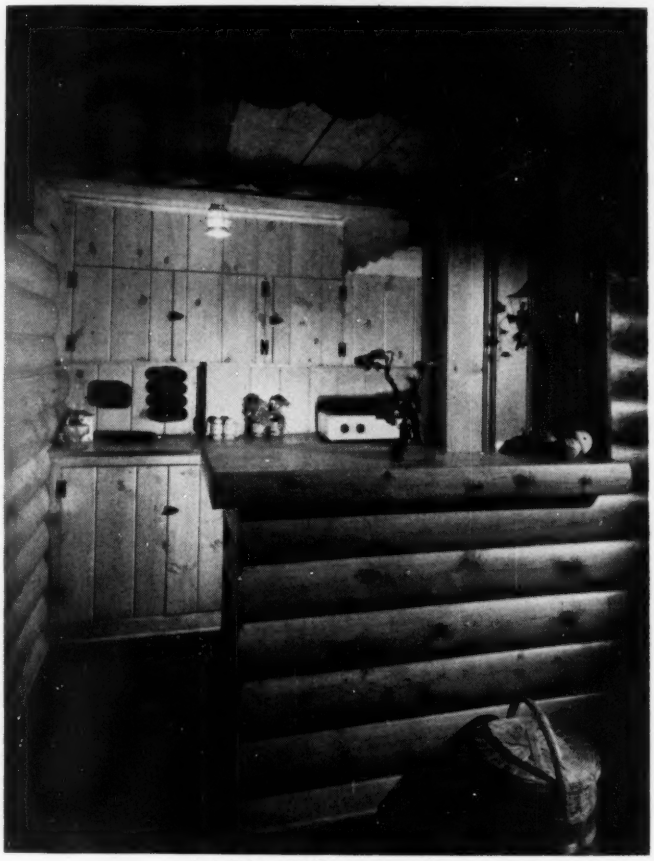
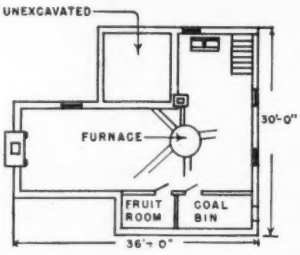
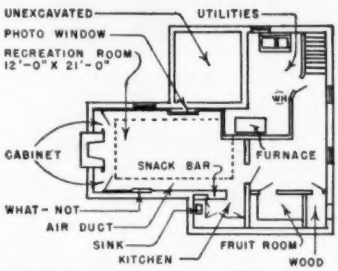


Photo 2: Compact kitchen and snack bar



ORIGINAL BASEMENT PLAN FIG. 1



REMODELED BASEMENT PLAN FIG. 2

With that end of the basement taken care of we began designing the recreation room. What fun we had kicking ideas around!

To begin with, we both love the outdoors. We often talked about building a log cabin by the lake. In fact, we already had designed a log cabin and everything that went with it. All it needed was a place to happen. Somehow we never could find the time to build this cabin, with so much of my time taken up with work at home. We finally figured that if we couldn't build that cabin by the lake, why couldn't we enjoy cabin atmosphere right here in

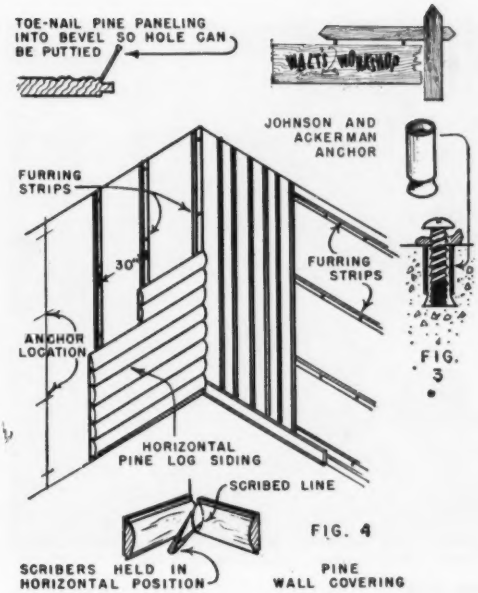


FIG. 3

FIG. 4

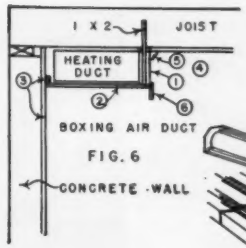


FIG. 6

FIG. 5

FIG. 7

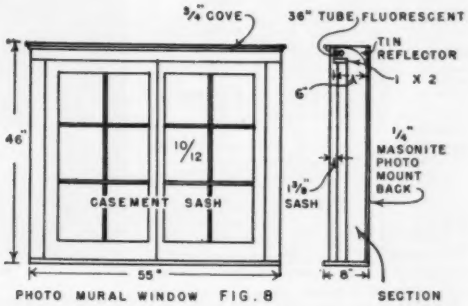


PHOTO MURAL WINDOW FIG. 8 SECTION

Highland Park? Upshot of the whole thing was, after we had the room finished as you see it in Photo 1, it had all the earmarks of a log cabin. After one is in it for ten minutes he completely forgets that he is in the basement.

The two long sides of the room are covered with log siding placed horizontally. The log siding has a 7½" face and was milled out of 6/4 Ponderosa pine loaded with sound knots. The fireplace wall, as well as the one opposite, was covered with random width knotty pine vertical panelling. The ceiling has 1 x 8 "V" edge pine panelling.

Having completed the basic plans we first relocated electric outlets, two ceiling lights on a switch, and four wall receptacles. Then came the furring of the concrete walls to which the boards later were nailed. There are several types of anchors that can be used on masonry. We used Johnson and Ackerman's (Fig. 3). This anchor is tapped on the inside for a machine bolt and has a lead shield around it and is tightly packed in the hole in the masonry with a set. The 1 x 2 furring strips were spaced 30" on center with four anchors, one on the top and bottom and two between for the horizontal log siding. Four horizontal furring strips were used for the vertical panelling (Fig. 4).

The holes for the anchors are located by first laying out and boring holes slightly larger than the bolts in the furring strips. The furring strips then are held in position and the masonry marked with a punch through these holes. Cross lines on the masonry at the hole location will be a help to get the holes drilled into the exact location. Holes can be drilled in masonry with a star drill, either by hand or electric hammer, or they can be bored with a Carboloy tipped drill. Contractors frequently fasten furring strips to masonry with a gun that fires a charge, pushing a steel nail through the wood and into the masonry.

The Miracle anchor nail (Fig. 5) is an anchor which the home owner can apply easily and quickly. It is essential, however, that careful thought be given to the application according to the instructions.

Basement walls will sweat when warm moist air strikes them during the summer's humid weather. This can be prevented by covering the walls with 15-pound tarred felt. The felt should be placed against the walls under the furring strips and all the joints sealed. It is needless to say that walls should be waterproof. Cracks that show signs of water seepage should be undercut and sealed with a concrete waterproofing material such as "Comco" No. 2 iron method.

After the furring of the walls was completed we started on the ceiling. Someone once said, "Necessity is the mother of invention."

Did you notice the drop ceiling around the outer edge of the room (Photo 1)? That was not done just for decoration. The drop, or boxing, houses the cold air returns and a warm air duct. It does, however, add something to the room which a straight ceiling never would have done.

The boxing in of the ducts, or dropping of the ceiling, was accomplished by hanging a 1 x 8, [(1) Fig. 6], from the ceiling joist with 1 x 2's. These 1 x 8's were set out just far enough to accommodate the widest air ducts. The soffit boards (2) were nailed to piece (1) and to a furring strip (3). The 1 x 8 ceiling boards with "V" edge were nailed to the ceiling joist next.

This was a simple operation requiring little explanation. The 1½" cove molding [(5) Fig. 6], should be coped. A cope joint is made by cutting a 45° miter and following the profile line with a coping saw so that the cut will fit against the adjacent molding in the corner (Fig. 7). The little scalloped edge (6) in Fig. 6 is made out of ¼" plywood 2½" wide with 6½" between the points. This scallop covers the end grain of the soffit boards and also makes an interesting decoration.

What to do with the two long walls of the room? We just couldn't have plain log siding, regardless of how interesting it might be. Then, too, we wanted to give the room ground level atmosphere to overcome the basement feeling. The outcome of it was the casement window with a photo mural (Photo 1). The window naturally had to have some depth to show off the mural with proper lighting. Since the concrete wall prevented us from going out, we built the window into the room, and Ruth made some drapes which conceal the fact that the window is built inward from the wall. Details of the window construction are shown in Fig. 8. The frame of the window was made out of ¾" x 6" boards for the sides and top. A 1 x 8 board formed the bottom. The facing or casing of the window was made out of 1 x 4's on the sides and top. 1 x 2 baffle strips were placed in back of the casing to hide the fluorescent lights. My first plan was to have three 36" lamps, one on each side and one at the top. However, after we mounted the photo mural in the window which, by the way, is a hand-tinted lakeside scene, we found that it required only one light from the top. The light is reflected down with a curved piece of bright tin over the light. A switch on the side of the window controls the light.

We had planned another window on the opposite wall but decided that two such picture murals would be too much. Besides, Ruth had to have a place where she could display her "Toby" mugs. The result was a whatnot shelf (Photo 3). The shelf is made out of ¾" pine for sides and shelves. The back is 6" "V"-grooved pine panelling. Details of the

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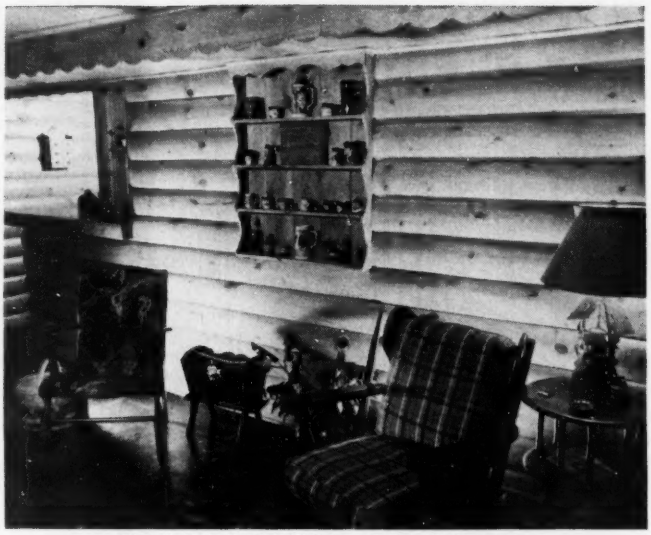
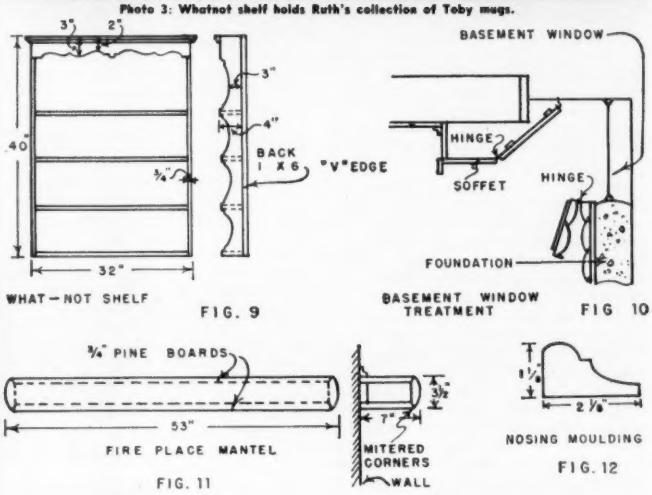


Photo 3: Whatnot shelf holds Ruth's collection of Toby mugs.



WHAT-NOT SHELF FIG. 9

BASEMENT WINDOW TREATMENT FIG 10

FIRE PLACE MANTEL FIG. 11

NOSING MOULDING FIG. 12

shelf are illustrated in Fig. 9.

To overcome basement atmosphere in a recreation room one must give careful consideration to the basement windows. To do it right one has to cover them up, but then how can the room be ventilated if the windows cannot be put to use? Our solution did both things.

We were able to hide the one window but still use it for ventilation when we wanted to. The window location is to the left of the picture window under the soffit of the duct boxing. The top and half of the next log were cut out, fastened together with two cleats on the back, and hinged at the bottom so that it can be swung down. You can see it in Photo 1 if you look closely. A section of the soffit directly above was cut out and fastened together with cleats and hinged at the near end. If we want to open the window we push the soffit section up, holding it there with a hook, and drop the log section down leaving the window free to be opened (Fig. 10). When these sections are closed and in place, no one would suspect that a window existed.

The fireplace wall and the one opposite were finished in vertical knotty pine panelling. The fireplace projected 14" out into the room, which made it possible to have cabinets on either side. This provides an excellent place to store my books and magazines. What's more, there is a writing desk complete with drop leaf and pigeon holes on the right-hand side of the fireplace. This makes an ideal room for me to do my writing, and when the room is used for other purposes, we just close up the doors and everything is out of sight.

The fireplace mantel is built-up of ¾" pine boards mitered on all corners with the face rounded like the log siding (Fig. 11). I selected a board with a beautiful

large sound knot for the face board, centered the knot and built the shelf around it. The mantel was hung to the wall by first screwing the 1 x 2 strip to the wall, slipping the mantel over it and nailing at an angle into the wall and the 1 x 2. A piece of ¾" cove molding coped on the ends finished it off. A piece of 1⅛" x 2⅛" nosing was used as trim around the brickwork (Fig. 13).

The old fruit room was an ideal place for the kitchen. Although not very large, it has all the necessary facilities for serving food after the major portion has been prepared in the kitchen upstairs. The snack bar as depicted in Photo 2 acts as a separation between the kitchen and the main room, and also provides a place on which to set the food. The kitchen has a small 12" x 18" sink with a swing spout faucet, a two burner electric stove, and lots of cupboard space for dishes, pots and pans. A little 8" electric fan set into a metal box exhausts cooking fumes out through the ceiling.

Last, but by no means least, is the floor treatment. The concrete floor, like that basement window, gives basement atmosphere. We covered the floor with asphalt tile laid in a waterproof cement.

The finish of the Ponderosa pine must be considered from both the appearance standpoint and the preservation. A good finish can be had only if each board has been thoroughly sanded to remove all machine marks, the last sanding to be 6/0 sandpaper. To prevent moisture from getting into the wood—and basements will have a certain amount of it—it is necessary to treat the wood with a decay-resisting product like *Wood Life* which contains Pentachlorophenol and Tetrachlorophenol.

All boards were rough sanded, then treated. When dry they were given the final fine sanding. This left the surface smooth and clear. After completing the woodwork in the room we applied the finish. Pine should be given an aged effect which means just a touch of color to subdue the newness and brightness of the raw wood. We took Ipswich Minwax and diluted it half with benzine, applied it and wiped it off before it set. This gave the wood a nice, warm, aged color. We followed this with a thin coat of white shellac thinned with equal parts of denatured alcohol. The final coat was flat varnish, steel wool between coats after drying.

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CAULK AND TUCK POINT YOUR HOME AGAINST WINTRY DRAFTS

By FRANK CULHANE

Associate editor

THE coming of winter reminds us of the jobs we should have done last summer. In this article we will describe caulking and tuck pointing to stop the most common sources of leakage.

All of these jobs can be performed by any houseowner in spare moments. The materials and tools needed are readily available. Packaged cartridges (Fig. 1) for caulking cement used on window and door frames, and mastic for sealing concrete work, now are available in every hardware store and lumber yard. Guns to hold the cartridges are cheap. Most dealers will lend the guns when the materials are purchased from them.

Leakage Around Openings in Frame Buildings

Most common source of air leakage is around window and door frames. You can detect this by traces of soot that show around the inside casings of the frame. Another common source is the outside joints of bay windows and "Ls."

On frame houses the window frame consists of pulley stile (Fig. 5) (the side member), an outside casing (usually 1⅛" x 3⅝") and a sill. On older houses there are two sills (Fig. 5D). One, a thin sill fitted in the frame, rests on a thicker sill which projects out under the casings. The joint between the sills is a common source of trouble, not only because of air leakage but because water seeping into this joint causes the members to rot. This joint should be caulked.

The window frame on frame houses is placed in the rough opening after the sheathing is in place. A 2" opening is provided between the back of the frame and the studding for the window weights. The casing is nailed to the rough sheathing and the outside siding butts into the side of the casing.

Air leakage occurs because the outside casing shrinks away from the ends of the siding and the rough sheathing shrinks inside. The building paper disintegrates, allowing free passage of air from the outside. The amount of leakage is considerable. It is a major source of heat loss.

FIG. 1

CARTRIDGE FOR CAULKING GUN

FIG. 3

STANDARD CAULKING GUN USED BY PROFESSIONALS HAS THREE REMOVABLE NOZZLES.

GUN CAN BE USED FOR BULK OR CARTRIDGE CEMENT.

FIG. 4

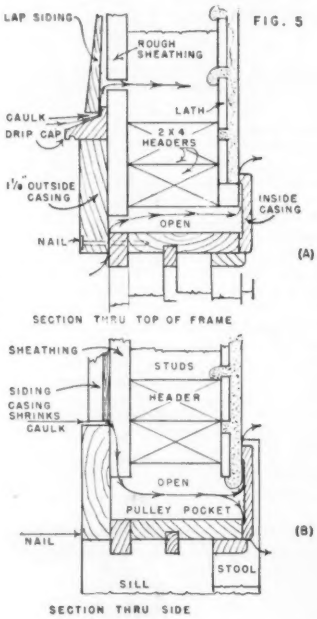
DISC KEEPS HANDS CLEAN WHEN LOADING STANDARD GUNS

FIG. 7

CAULKING WINDOW FRAMES NOTE ANGLE OF GUN.

FIG. 2

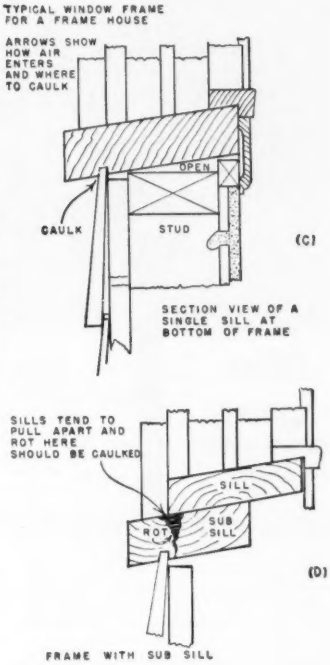
CAULKING GUN TO HOLD CARTRIDGE.



Caulking the open joints is a short job and it will seal the joints against any infiltration of air or water from the outside.

Leakage Around Window and Door Frames Set in Masonry

Window frames for brick or stone structures are built in the form of a box (Fig. 6B) approximately 4" wide. The inside of the box is the space for sash weights. On the face of the box is a 1⅛" x 2" molding strip called a "brick molding." This strip serves as a guide for the bricklayer and as a frame to hold screen and storm sash.



Carpenters set the frames first on this type of construction. Then the bricklayer lays his brick to the frame. Often the fit is sloppy (Fig. 6A) and there are openings around the frame caused by chipped brick or because the brick do not fit to the frame. Incidentally, these openings provide places for flies to hibernate during the winter.

The outside face of the box projects ½" beyond the pulley stile to provide a stop for the outside sash and for screens and storm sash (Fig. 6B). Occasionally this face warps and is forced out when the sash swell. The resulting opening allows a considerable amount of air to enter the box and infiltrate into the interior.

The joint where the wood sill rests on the stone or brick sill (Fig. 6C) should be caulked to prevent melting snow from working under the sill. On wide windows with stone sills the stone cement always washes out of the joints where

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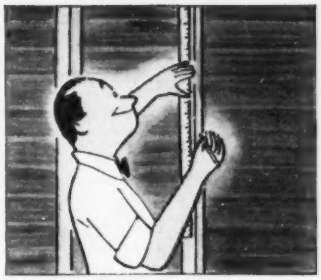

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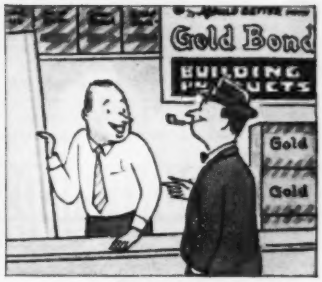

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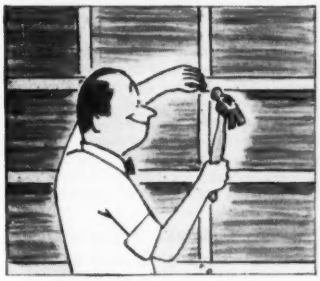

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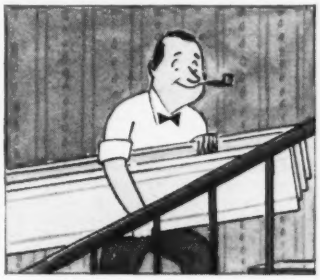

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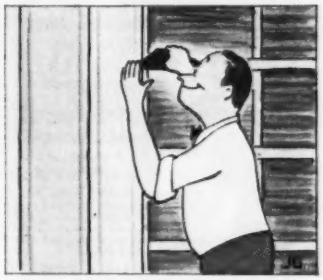

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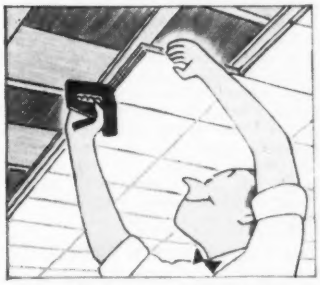

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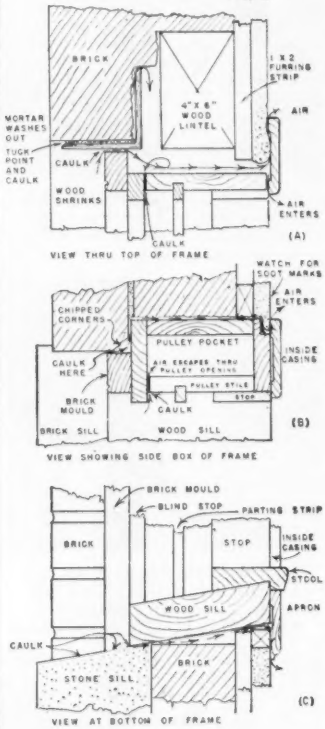
the stones meet. Expansion and contraction of the stone breaks the joint open. Caulking cement used instead of mortar will insure a tight joint. On some of the wider joints in my home I push cotton twine or "candle wicking" soaked in paint into the joint before applying the cement. Allow at least ¼" or ⅜" for the caulking cement.

Material for Caulking

Caulking cement is a putty like material which preserves its elasticity for a long time. It comes in two forms. One is a stiff mixture called "knife cement" which is applied with a putty knife. It is used for glazing and for caulking. A more plastic mixture is designed for use in caulking guns. Loading caulking guns was a messy job until the manufacturers began to furnish cardboard cartridges (Fig. 1) which fit into the guns.

WINDOW FRAME IN A BRICK WALL SHOWING JOINTS THAT SHOULD BE CAULKED. ARROWS SHOW PATH OF AIR. FIG. 6



Another improvement for use in loading guns with bulk cement is a device which is placed on top of the cement (Fig. 4). In use the open gun is placed over a hole in the disc. The operator pushes the piston down to exhaust the air from the gun. As he presses the gun down he withdraws the piston. The cement follows the piston to fill the gun.

How to Use a Caulking Gun

There are three nozzles furnished with caulking guns. These control the amount and shape of the stream of cement. Use the nozzle which fits the job to be caulked. After each use clean the gun and nozzles with kerosene.

In use the loaded gun is placed at an upper corner. The operator works the trigger a few times to compact the cement. When the material starts to flow he moves the gun down the joint at a rate which fills the joint completely (Fig. 7) but which does not allow the cement to pile up. Pressure on the trigger assures an even flow. A few passes are necessary before an operator learns the proper rate and pressure necessary for a smooth joint. Once this is learned caulking can be done rapidly. A home owner can caulk several windows in an evening.

Filling Wide Joints

Wide open joints are common where porch floors meet the walls, in masonry around the brick mould, under baseboards on outside brick walls and where cement walks join the house. These joints are too large to fill with caulking cement alone. These openings first are packed with Oakum, a tarred hemp like material used by plumbers, before applying the caulking cement. Chain and hardware stores carry a product which resembles lambs wool for use around window and door frames. It must be packed firmly to allow a firm seat for the cement as it tends to prevent the cement from adhering to the wood when it is loose.

Ribbons of caulking material in rolls also are available under several trade names. This product can be applied with the fingers and removed when desired. It is frequently used as a temporary stop for leakage around the inside of window frames. I have used it to seal openings in outside trim and around porches. The material is available in hardware stores.

Sealing Openings in Cement and Brick Work at Ground Level

Openings in concrete walks, joints where walks join buildings and masonry at the ground level are sealed with mastic or plastic asbestos cement. The sticky black material called asphalt roof cement also is used. The same material is used for sticking down asphalt shingles and for repairing leaks in gutters. It can be purchased in bulk as quarts or gallons at a reasonable price. It is somewhat messy to use as it sticks to the trowel. A more convenient form now available is the cartridge described before for use with caulking cement. The asphalt cement cartridge fits the same gun. Large openings in cement work should be packed with Oakum before using asphalt cement.

Tuck Pointing Joints in Brickwork

"Tuck pointing" is a term used to describe the process of filling open joints in brickwork with mortar. You can prepare a few joints, mix a small quantity of cement and finish a sizable section in an hour. The places most generally in need of tuck pointing are the mortar joints in brickwork close to the ground, the joints around the iron

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lintel (Fig. 6A) over doors and windows (a very important cause of water penetration) and external corners and the copings which cover brick walls. Chimneys nearly always need attention in older houses but that is a job which takes time because of the scaffolding that is necessary.

The only tools necessary for tuck pointing repairs are a cold or cape chisel (to remove the old mortar), a wire brush to clean the joint, a small pointed trowel and an old kitchen knife to force the new mortar into the joint. A board about a foot square with a round handle fastened in the center provides a handy means for holding the mortar. Tuck pointers' trowels with an offset handle are used by professionals. The half inch width is the most useful for our purpose. The old kitchen knife is a very satisfactory substitute for the professional tool.

To prepare the joint chisel out all the old loose or rotted mortar. Open up any defective vertical joints. Brush out all loose mortar and clean out dust with a wire brush. *The joint must be clean.* Hose down the wall. When the free water has drained away and the wall is still damp, place the edge of the mortar board at the joint. Force the mortar into the joint with the knife or trowel. Smooth the mortar and clean off any excess from the face of the brick. Dampen the mortar the day after application, if possible, in order to prevent too rapid drying.

Mortar for tuckpointing can be purchased in dry form ready for the addition of water. It is called "Mortar Mix." If you wish to mix your own, use any one of the following mixture. I use a coffee can as a measure for small jobs.

1. Portland cement, one part; hydrated lime, one part; torpedo (gravel) sand, two parts. Use just enough water to make the mixture plastic—no more.

2. Masonry cement, one part, sand, three parts.

The sand for tuck pointing must be screened fine. A window screen is a good screen for this purpose. Sand must be clear of loam, leaves, etc.

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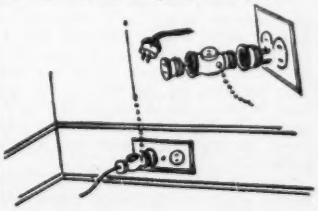

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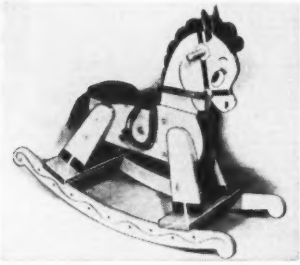
Adv.

HOBBY HORSE MAKES EXCELLENT CHRISTMAS GIFT

By STEVE ELLINGSON



Do you know some little boy or girl who wants a rocking horse for Christmas? Someone small and eager who will be thrilled to get on his back and ride him? Someone who can make him be a western "bronc" or a Kentucky racer if need be? If you do, you will be pleased to know that you yourself can create this handsome fellow. It is inexpensive and so easy you'll wonder why you ever thought that good toys for children were a luxury. You needn't be an artist . . . you merely trace all features such as the eye, nose, bridle, etc., on the wood, then paint over the tracings just as the pattern specifies. He's fun to build and when he's finished watch him gallop away with the happiest small person in the world on his back.

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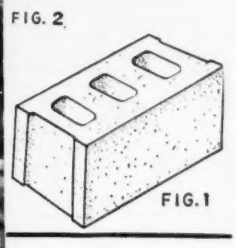
Fig. 1. 8" x 8" x 16" is the standard size for concrete blocks.



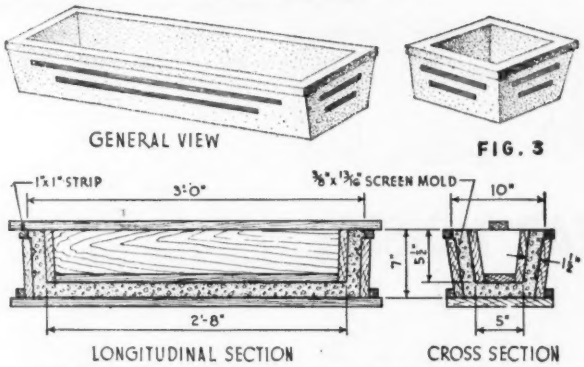


Fig. 3. Forms for concrete flower pots must be built of good clear lumber.

CONCRETE KNOW-HOW FOR THE HOME OWNER

Part 3

By L. J. SMITH

Blocks, Forms and Cold Weather Concrete

Concrete Blocks: Few appreciate the broad use of blocks made by the concrete manufacturing firms (Fig. 1). The standard size is 8" x 8" x 16", including the ¼" mortar joint.

They make an excellent basement wall, resting directly on the footing; or a good abutment wall between two levels of the yard, or between yours and your neighbor's property line; or even a fine wall for the home, covered with a coat of watertight plaster. Properly laid, with a good strong mortar, they make a strong wall and one easy to set up.

For an abutment wall, they should rest on a concrete base 5" or 6" deep and at least 8" wide, with reinforcing rods to prevent unequal settling. One can clamp 1" boards on each side of the top and, after plugging the air holes of the top layer of blocks, fill to a depth of 2" or 3" using a 1—2¾—4 mix, to form a cap. Bevel the top edges about ½", with a trowel (Fig. 2).

There is little or no form work with blocks, which runs into good money both in labor and materials.

These easily handled blocks also may be used for a wading pool, or for the walls of a compost pit, or for a garage even if partly underground. One always should wet the blocks before placing them, to prevent their drawing the necessary moisture from the mortar, which is a 1—1—5 mix of cement, hydrated lime or lime putty, and fine clean sand.

Forms: There are two kinds of form work—one for walls, etc., where there is the one job to be done, the other where the forms are screwed or bolted together and used a number of times to make the same object.

In the first case, the lumber used is low grade and preferably green or at least damp from being out in the weather. Rough lumber often is used for this work.

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These forms must be nailed securely and well braced. Concrete weighs about 135 pounds per cubic foot and, when first placed, exerts a heavy lateral pressure which must be taken care of. It is a good idea to coat the inside of the forms with linseed oil which does not harm the concrete but makes it easier to remove the lumber after the wall has become strong—in, say, a week.

Where smaller forms are used to make a number of the same object, they are made of high grade clear lumber and are well finished and painted with waterproof varnish or shellac; then greased just before using. The parts are planned so that they can be removed easily, being screwed together (Fig. 3).

The mix for small work is quite rich, usually 1-2-3 and the "three" is fine pea gravel. For smaller jobs, like flower pots, a 1-2½ cement-sand mix is used, measuring by volume—say, per shovelful.

Mix just as thoroughly as for a larger piece of work but keep the water down to a minimum, depending on thorough tamping of the small amount of concrete to get a dense mass. If properly done, the greased forms can be removed with care 24 hours after pouring, although it is better to leave the first concrete in the form two days. Then, of course, brush off the surfaces and grease again before using. The concrete, after removal, must be kept continuously moistened for at least a week and covered to prevent evaporation.

Small concrete items often are tinted by using a small amount of powdered mineral coloring matter such as burnt umber, yellow ochre, Venetian red, etc. This usually is mixed dry with the cement and sand before adding the water.

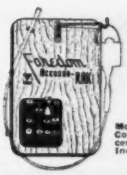
Placing Concrete in Cold Weather: The chemical hardening of cement is fastest in real hot weather. It slows down to almost nil as the materials approach freezing temperatures. Warm weather, therefore, is the ideal time to do this type of construction. If it is necessary to mix and place concrete in cold weather, it can be done using the following precautions.

All the materials should be as warm as possible just before the mixing. Even the cement should be kept in a warm place. The sand and gravel are heated by placing them around a steel pipe or piece of old culvert with a fire inside; or on a heavy piece of steel plate over a wood fire. The water should be heated to at least 100° F. Do not use more water than actually is necessary. Make a stiff mortar or concrete which will stand up in a high cone without slumping.

Commercial calcium chloride is used at the rate of 2 to 2¼ pounds per sack of cement to accelerate the initial hardening process. It can be mixed with the water or put dry in the dry mixing of the materials.

The mixing should be done as rapidly as possible and in a sheltered spot. Then get the concrete into the form without delay. After placing, the concrete should be well covered to hold the heat. While it is most important that the concrete be kept well above freezing for two days, it should not be allowed to freeze for one week if that is at all possible. For the smaller jobs about the home one can cover the work with several layers of canvas or other tight material. If outside, raise the canvas sufficiently and place one or two lanterns above the concrete. It is surprising what a lighted lantern will do to keep out the frost.

Early strength cement often is used for winter concrete work. Its ultimate strength is about the same as that of ordinary cement, but it hardens as much in two days as ordinary cement does in seven. While it costs somewhat more, it is a definite help in doing winter concrete work, by speeding up the curing process.



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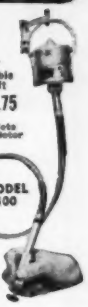

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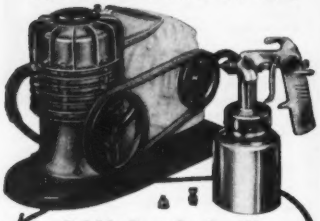

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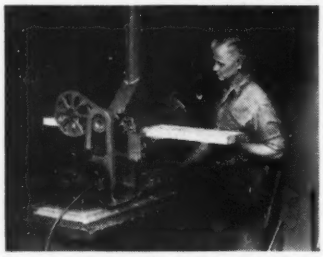

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GOOD FINISHING PRACTICES

by J. G. McCollam
CONTRIBUTING EDITOR

A department devoted to advancing the workshopper's skill in the important final stages of his craft—good wood finishing.

FRENCH POLISH

By J. G. McCOLLAM

In the days before the advent of the spray gun, brushing did not have quite the refinement required for fine pieces of furniture. Some two hundred years ago French cabinetmakers discovered that purified and refined shellac or French Varnish could be applied with a cloth pad using linseed oil for a lubricant to prevent the pad from sticking. The resulting finish was far superior in gloss and smoothness to anything used up to that time.

Antique dealers and writers about antique furniture would have you believe that French Polish is a lost art, so difficult and obscure that it is next to impossible to learn. The truth is quite different; every finish patcher in furniture factories and stores all over the country is skilled in the art to various degrees of proficiency. The process of color patching described in this department in the July-August issue of *Popular Homecraft* is nothing more nor less than a form of French Polish.

The materials are few and easily obtainable:

French Varnish (refined and dewaxed shellac).
Methanol (denatured alcohol).
Boiled linseed oil.
Cotton batting or cheesecloth.
Washed muslin.

The initial steps prior to the application of French Polish are the same as for any other top coat. The wood, if necessary, should be stained and filled. After overnight drying the French Polish may be applied.

A wad of cotton or cheesecloth is placed in a small square of washed muslin. The corners of the muslin may be tied with a string, or simply held in the fingers. Equal parts of French Varnish and Methanol are poured in a small cup or dish, and linseed oil in another.

First dip the pad in the French Varnish picking up on the pad a small amount, then dip in the oil picking up an even smaller quantity. The pad should be pressed into the palm of the other hand, squeezing out the surplus finish and distributing it uniformly on the pad.

Start by making circular motions above the surface of the wood without touching it and then gradually lower the pad until contact is made with the surface. In this way the pad is applied to the wood in an arc tangent to its surface. This is not particularly important at this stage but it becomes increasingly important as the finish is built up.

Making the pad by folding a wad of cheesecloth or cotton in a piece of washed muslin.

Holding the pad properly by grasping the corners of the muslin in the fingers.

Dipping the pad in the dilute solution of French Varnish and Methanol.

The circles of this motion should be three or four inches in diameter on flat surfaces. However, in narrow areas such as legs and moldings, a straight back-and-forth stroke with the grain is used. The pad never must be allowed to touch the surface except when it is in motion. Even a momentary pause will cause the pad to stick and lift the finish.

The whole surface should be gone over with one application of French Polish overlapping the adjacent circles in such a manner as to achieve a uniform coating. The pad should be dipped in the

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RUSSELL C. JOHNS, Publisher.

Sworn to and subscribed before me this 12th day of September, 1952.

(Seal) WILLIAM J. BELL, Notary Public.
(My commission expires May 9, 1955.)

varnish and in the oil occasionally to replenish the supply on the pad, each time squeezing out the excess on the palm of the other hand. Three or four times over the same surface constitutes a single coat. More than that increases the danger of lifting the finish because it is too soft.

Four to six hours' drying time between coats is the minimum; overnight is better. As the finish is built up the strokes should be changed from circular to long

After dipping the pad in the French Polish solution it is dipped lightly in boiled linseed oil.

Padding the French Polish on a carved teakwood chest.

Final rubbing of the French Polish with the heel of the hand lubricated slightly with linseed oil.

straight strokes with the grain of the wood. The first coats should consist of a high proportion of varnish to oil; as the finish builds up, the varnish should be decreased and the oil increased.

When sufficient film is built up to suit the individual the pad may be discarded and the surface further polished with the heel of the hand occasionally lubricated with a drop or two of linseed oil.

There are other ways of combining the French Varnish with the linseed oil. Some prefer to apply the oil to the pad with the finger tip while others mix the varnish and oil together in one container. The way described here is not necessarily the best but it is the manner I prefer.

There are several proprietary French Polishes on the market that have a lubricant incorporated in their formulation. These will do an equally good job and are somewhat simpler to use.

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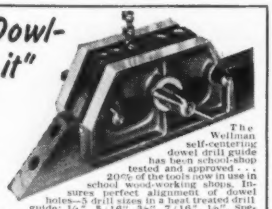

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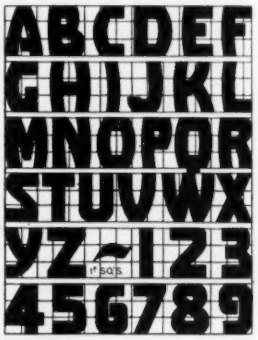
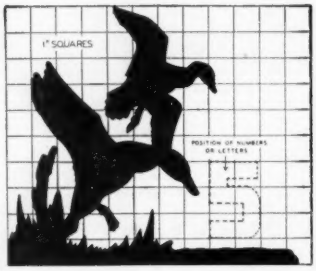
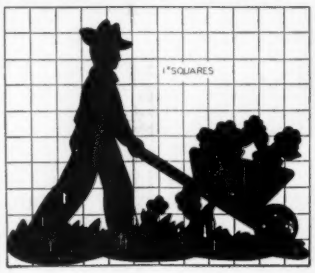
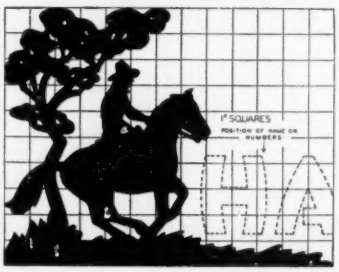
Designs may be found in magazines and enlarged or adapted to use for markers. Let them express your hobby, business or personality.









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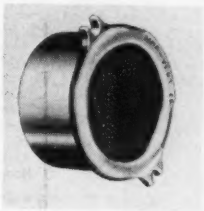

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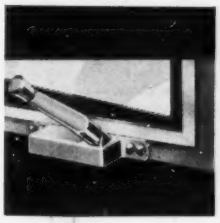

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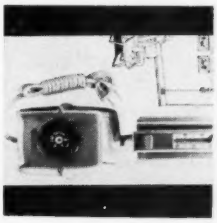

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Woodworkers' Information Department By Frank Hegemeyer

Associate editor

Do you have any particular woodworking problems? We are here to help you with the techniques involved in the use of hand or power tools or furniture constructional problems. Please address your questions to Frank Hegemeyer and enclose a stamped reply envelope.

Q. I have a multi-purpose power tool outfit which has a saber saw attachment. I can cut along lines and make bevels by tilting the table but what I want to know is: Can a ripping fence be used with the saber saw attachment for cutting a straight bevel, or for that matter, a plain rip cut? Is it possible to cut accurate cross-cuts by using the miter gauge in the table slots? I have tried this but the cut always seems to run off. Also advise me if the saber saw has an advantage over the jig saw.

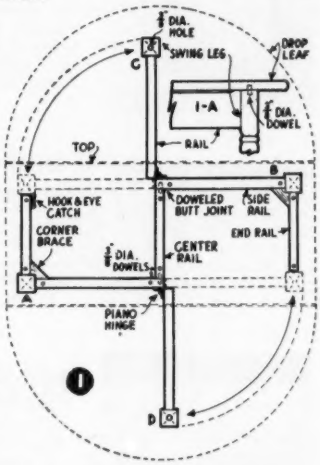
Alexander Cooke
Brooklyn, N. Y.

A. Ripping or cross-cuts can be made with fairly good results on the jig saw attachment of a multi-purpose tool if a saber blade is mounted in the machine. Due to the fact that a saber blade is usually unsupported at the upper end, it has a tendency to wander from a straight line, particularly if the teeth have been dulled on one side. To overcome this "side tracking" it is suggested the blade be chucked at the upper end or supported by the guide above the table. Powered scroll saws, jig saws and saber saw machines are one and the same. The use of a saber blade does not alter any of these three classifications to be referred to as a saber saw. The saber blade—usually ¼" or more wide—merely enables one to make inside cuts without the repeated upper chucking customary when a narrow blade is used.

Q. Recently I saw at an antique shop a table which was both beautiful and unusual. It was an early English mahogany dining table, with drop leaves which were extended by swing legs. The part that struck me as odd was that though there were only four legs, two of them swung out to support the leaves. The top of the table with the leaves down was about 12" wide and the leaves perhaps 26" wide or long. The table was perfectly balanced no matter whether one leaf, the other, or both were up. Because it was in a shop, I could not examine it closely enough to understand how the constructional arrangement was made for the legs to swing as they did. Do you have any idea as to how this was done?

E. J. Wooley
Oakland, Calif.

A. Without actually seeing the table I can only visualize the swinging arrangement of the legs. My theory is that the constructional details may be somewhat similar to those shown in Fig. 1. While this arrangement may not be identical with that of the table you speak of, the end result, nevertheless, would be the same in keeping the table in balance whether the leaves were up or down. Note that the side and end rails are joined to legs A and B. These two L-shaped units are then joined to the center rail to form a horizontal S as it were. This complete unit is doweled to the table top or anchored with corner irons or braces. Legs C and D are attached to the swing rails which in turn are hinged to the side rails as indicated. Note in Fig. 1-A how a small dowel pin keeps the swing legs from being jolted sideways when supporting the raised leaves. The pins are glued solidly in holes on the underneath side of the leaves and come to rest in holes bored in the legs. To lower the leaves they are simply raised slightly and the hinged rails swung in so that the squared section rests against the end rails. A hook and eye catch, as shown, anchors each leg to the rails when the leaves are down.



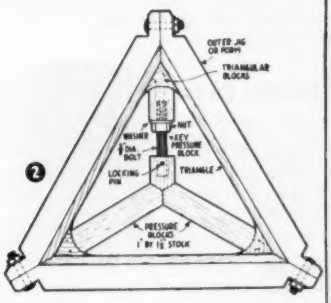
Q. I am wondering if you can give me any pointers on wood turning. My main difficulty at present is to get the right kind of chisels. The commonly found chisels are too large to get into the fine spots on small spindle turnings, etc. Could small wood turning chisels be satisfactorily made of cold drawn steel? If not, what kind of metal should I use to fashion these tools? I have been told that an ordinary file worked down to the right shape would be O.K., but it seems to me that this substitute would be too brittle for proper sharpening and would have a tendency to snap in two. Which grit and type of stone is best suited for sharpening chisels? How fast should the stone run for best results?

Geo. A. Smith
Tuscaloosa, Ala.

A. Excellent wood turning chisels can be made from steel bar stock if the material is tempered in the following manner. Prepare a mixture of water, 4 parts; flour, 1 part; salt, 2 parts. Mix to a paste. Heat the steel until a coating adheres when dipped into the mixture; then heat to a cherry red and cool in cold soft water. This process produces a very hard steel suitable for small wood turning tools. Ordinary files with the teeth ground off make good chisels but care should be exercised in their use. Due to the brittleness of file materials the chisels should not be allowed to have an excessive overhang inside the chisel rest or used for roughing square stock into the round, particularly on large turnings. A medium grit resinoid bonded aluminum oxide wheel is best for fashioning file or hard steel chisels to shape and a fine grit for bringing them to a keen edge. Resinoid bonded wheels are used dry, cut cool and remove stock rapidly. Operating speeds for grinding wheels depend on the type, grade and size. In general, a 6" diameter wheel should not be run over 4000 rpm. To play safe, it is recommended the wheel be run at or close to the rpm designated on the label affixed to the side of the wheel.

Q. Could you give me some information as to where I can purchase a clamp which expands instead of contracting? I am making a triangle in which each corner is to be reinforced with a triangular wood block. In order to glue these blocks in the three corners pressure must be applied outwards towards the outer form as indicated in my sketch. The size of the stock for the triangle is 3/8" x 1 1/2". The triangle is for use on a billiard table.

James A. Autry
Abilene, Texas



A. I have not been able to locate a source for a clamp having a three-directional expansion such as you require. However, the device shown in the Fig. 2 drawing—which you can easily make—should prove successful for gluing in the corner blocks. By simply turning the nut outwards on the bolt the two wood members on the key pressure block automatically expand to force the upper block into the corner and at the same time pushes the lower pressure blocks outwards resulting in an equalized pressure to all three corner blocks. The pressure blocks are rounded on the outer ends and double beveled on the inner end as shown.

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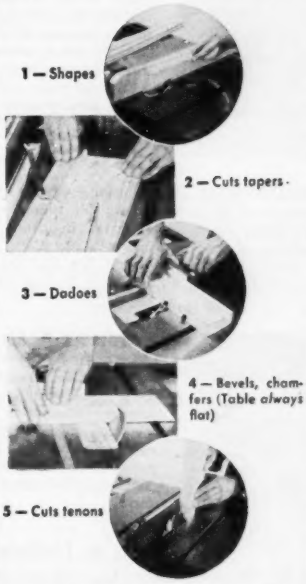
SPECIFICATIONS

Max. Depth of Cut	2⅜"
Table Ahead of Blade	10½"
Rip to Center of	19" panel
With one extension	36½" panel



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SMALL GIFTS FOR THE FAMILY

(*Continued from page 91*)

and wax as a finisher. Or use a stain finish if you prefer.

The small fry would be delighted with a ring toss board on which stand three humped cats with upright tails serving as targets. Cut the three cats from ¾" stock and the board from ¼" stock. Paint the cats and the board before assembling, using enamels in any color combination. Fasten the cats to the board with flat-headed wood screws, countersunk into the base so there will be no danger of scratching the floor. The rings are rubber fruit jar rings covered with crepe paper or yarn. If crepe paper is used for the wrapping, finish by applying several coats of shellac to make a hard, shiny ring.

Next issue THE HOME OWNER section will feature the interior waterproofing of basements. Will cover waterproofing paints, drains, sump pumps, in an unusually thorough manner, by Associate Editor Frank Culhane. If you have a dampness problem in your own basement, be sure to read this fine article.

HELPFUL LITERATURE *for the home owner*

Why and How to Weather Strip

(H-1) Bridgeport Fabrics, Inc., has just issued a well-illustrated, helpful 16-page booklet on weather stripping. Discusses the importance of good weather stripping; different types; how to use Inner-Seal; handyman tips. Shows how to use weather strip on doors, windows, in corners, as moldings, at sills, etc. Home owners ought to be checking their weather stripping needs right now if they have not already attended to it. Circle H-1 on request form.

Oak Flooring Guide

(H-2) National Oak Flooring Mfrs. Assn. has issued an informative 32-page booklet for home owners which covers thoroughly the subject of oak flooring. It explains the importance of good flooring, tells the kinds of oak flooring, how to install, finish, maintain. We call this booklet a mighty midget of helpful hints. Circle H-2 on order form.

Hardware Home Planner

(H-3) An 8-page color booklet by Yale & Towne Mfg. Co., profusely illustrated with photos and drawings, designed to help home owners select hardware of good taste and durable service. Describes in detail the important relationship between hardware and moving parts, how to judge hardware, decorative values, lock data (installation, security, privacy, safety), checklist for hardware specification, miscellaneous hardware for cabinets, garages, etc. Circle H-3 on request form.

Fact Sheets on Fleetwood Garage Doors

(H-4) Crawford Door Co., whose "Fleetwood" line of upward-acting garage doors is featured for owner installation, has issued do-it-yourself installation sheets which will help the home owner erect his own garage. All details are clearly labeled, illustrated and described. These instructions are accompanied by full details of the door itself. Circle H-4 on the request form.

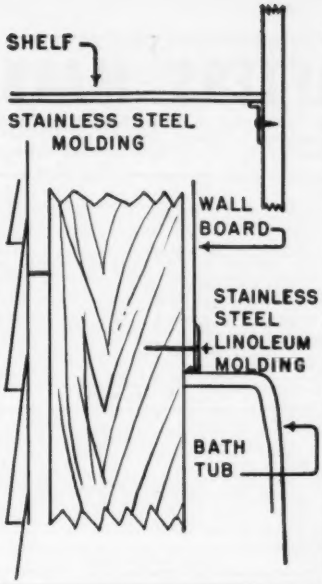
STAINLESS STEEL LINOLEUM TRIM HAS MANY USES

BY STERLING LAING

OFTEN the home mechanic wants to mount a drawer or a shelf in some piece of furniture, maybe in a bookcase or a cabinet. He wants something small, neat, easy to obtain and easy to use. In many of these jobs he will find that the stainless steel molding ordinarily used as trim in mounting linoleum on kitchen cabinets is just what he needs.

This material is good looking, well-finished and comes in a number of different shapes. It usually can be found in variety at furniture or hardware stores or in the catalogs of the large mail order houses.

Recently I wanted to add an extra shelf to an open type bookcase. I used a piece of pressed hardboard for the shelf and two pieces of "L" shaped molding 9½" long (which was the depth of the shelf) as brackets.



HELPFUL LITERATURE *for the home owner*

Gypsum Wallboard and Sheathing Catalog

(H-5) Certain-teed Products Corp. has published a 20-page catalog covering gypsum sheathing and wallboards, their advantages and uses. Gives detailed instructions for applying. It also describes in detail the laminated gypsum wallboard system and the fiber tape joint system used for treating joints between wallboard panels. Circle H-5 on request form.

"More Space for Living" Doors

(H-6) This multi-color folder shows the numerous applications of Multifold doors (the ones which open and close like an accordion) in different rooms of the house. A number of drawings and color sketches simplify visualizing for the home owner. Also describes color range for matching decorations, operating principle, and lists standard sizes. Circle H-6 on request form.

MAIL TO: **HOMECRAFT & The Home Owner**
154 East Erie St., Chicago 11, Illinois

Please have the manufacturer(s) send me without cost the following literature which was described in your "Helpful Literature for the Home Owner" column, November-December 1952 issue. I have circled the number(s) which interest me:

H-1 H-2 H-3 H-4 H-5 H-6

Name_____

Address_____

City & Zone_____

State_____

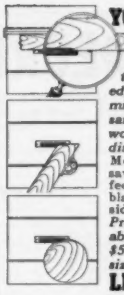
PLEASE CHECK HERE ALSO:

a. Do you ☐ own or ☐ rent your home?

b. How old? ..... years.

c. How many rooms? .....

d. How many in your family? .....



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BUILD miniature homes with our accurately-scaled materials. Send 25c for booklet and samples. Architectural Model Materials, Inc., Dept. H112, 4208 Armitage Ave., Chicago 39, Ill.

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(Continued on following page)

CLASSIFIED ADS

(Continued from page 127)

FREE Jugoslavia mint set with world approvals. Eastern and Southern Europe specialty. DENNEY, 2627 East Tenth, Tulsa, Oklahoma.

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KILN DRIED walnut, mahogany, cherry, maple and other hardwoods. Glued up and machined to your specifications. Stamp for prices. Corbett Cabinet Co., St. Marys, Pa.

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BEAUTIFUL Hardwood Plywoods: ⅛" and 3/16". Hobbyist's convenient sizes. Samples, prices, 10c. Plydeal, X-55, Raynham Center, Mass.

★ Carving chisels are thinner and lighter than similar carpenter's tools; in addition, the cutting edge is beveled on both sides of the blade.

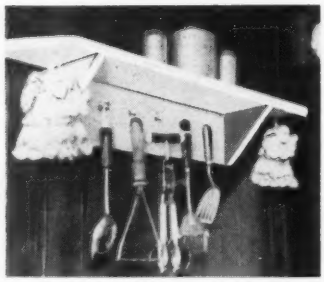
Quickie:
Utility Shelf

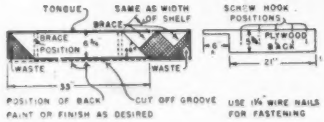
By Owen R. Bliven

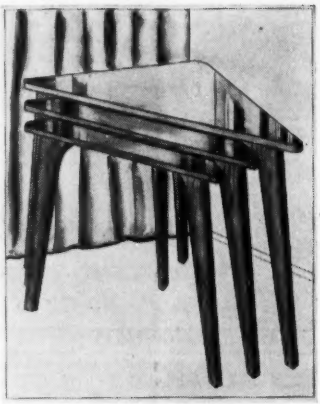
The lady of my house requested a utility shelf for the kitchen, to hold utensils needed in the work area. I took a 4' piece of matched lumber 7" wide, a scrap piece of ¼" plywood 5¾" x 21". A half hour later I was waiting for the paint to dry so that I could attach it to the wall.

The only tools required for the job were a hand saw, hammer, and a combination square. The tongue on the edge of the matched board serves as a simple decoration. Two 1" bright, roundhead screws fasten the shelf to the wall.

Paint or finish as desired. Use 1¼" wire nails for fastening.







STACKS OF TABLES

By ROBERTA L. FAIRALL

LACK of space poses no problem with these two sets of tables. The set of four snack tables, Fig. 1, makes one interesting multiple legged stand which may be quickly separated when refreshments are served. They are handy either in the house or patio.

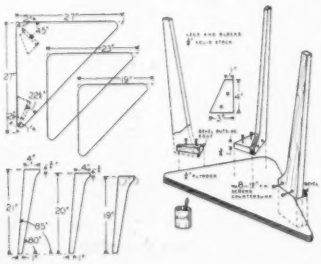
The triangular tables, Fig. 3, nest snugly in a corner. May be slipped together to save space, pulled forward to make a larger table or used separately when needed.

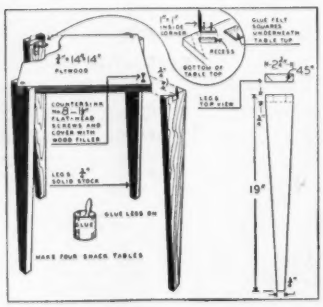
Both simply constructed sets may be built with hand tools from ¾" plywood for the tops and ¾" solid stock for the legs.

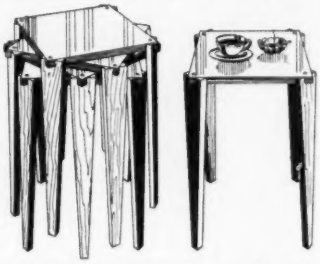
SNACK TABLES: Lay out measurements as shown in Fig. 1 using a try square for accuracy and sand the members. Saw notches in the tops of legs with a back saw and cut across the bottom of the notch with a coping saw. Fit the legs on the table and mark their position. Then cut the mortises in the table tops for one side of 1" corner irons. Bore pilot and shank holes for one screw to be driven through each corner of the tops. Apply fish glue in the notches of the legs, assemble and countersink the screws deeply. Screw on the angle irons for each leg. Cover the screw heads with plastic wood and glue four squares of felt under each table so they will not mar the tops of each other when stacked.

NESTING TABLES: After the members have been laid out and cut as shown in Fig. 4, bevel the outside edges of the two leg blocks which are set to the sides of tables. Mark positions of legs and blocks underneath the table tops. Drill the legs and blocks for screws. Glue and screw the legs to the blocks; then glue and screw the blocks to the table tops.

FINISH: Sand smooth with 1/0 sanding paper and brush on walnut stain. Wipe off excess with a clean rag. For a light finish, thin flat white to a stain consistency with turpentine, brush it on and let dry. Then polish with fine steel wool until the stain remains only where it has penetrated the soft wood. Give two "wash" coats of white shellac and again polish with fine steel wool. Brush on two coats of outdoor spar varnish. Polish with 3/0 steel wool until all the shine has been removed; then give the pieces a coat of paste wax.







BILL OF MATERIALS

Number of Pieces	Name	Size	Material
Snack Tables:			
4	Table tops	¾" x 14" x 14"	Plywood
16	Legs	¾" x 2¼" x 19"	Pine
16	Inside corner irons	½" x 1" x 1"	
16	No. 8—1½" F.H. wood screws		
	Felt scraps, fish glue		
Nesting Tables:			
1	Table top	¾" x 27" x 27"	Plywood
1	Table top	¾" x 23" x 23"	Plywood
1	Table top	¾" x 19" x 19"	Plywood
3	Legs	¾" x 4" x 21"	Pine
3	Legs	¾" x 4" x 20"	Pine
3	Legs	¾" x 4" x 19"	Pine
8	Leg blocks	¾" x 3" x 4"	Pine
3 dozen	No. 8—1½" F.H. wood screws		
	Fish glue		

Whittling and Woodcarving

★ Gouges are proper tools for carving hollow curved forms and finishing convex curved lines and surfaces. That gouge should be used whose sweep most nearly corresponds to the curvature of the line or surface to be cut.

★ Woodcarvers seldom use sandpaper since it leaves imbedded in the wood fine hard particles which quickly remove the edge of any tool subsequently used on that surface. Carvers should buy planed or scraped woods only.—Morris A. Hall

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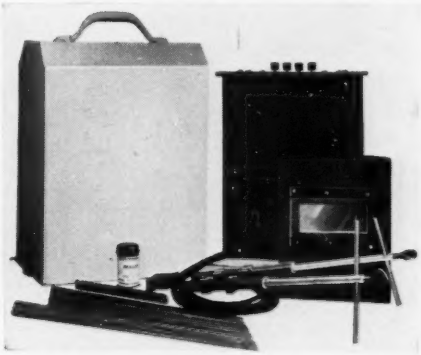
Kitchen and cooking utensils
Hundreds of other items



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1 doz. brazing rods
1 doz. welding rods
Instructions

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